



**HULK: CREATING MR. BIG P.32**

Exclusive interview: Meet the Mac masters who created the Hulk.



**WIN A DIGITAL CAMERA P.95**

Make us laugh, and win an Olympus Stylus 300 Digital.

**83**  
JUL  
2003

# MacAddict

A BETTER MACHINE. A BETTER MAGAZINE.



## LISTEN UP!

### ➔ iTunes Music Store

Why it's hot, what it's got—  
and what it's not

### ➔ Apple's New iPods

Fantastic new features—  
but are they worth  
the upgrade?



## POWERBOOK AUTOPSY

We crack open Apple's  
17-inch laptop and show  
you what's inside

**NO CASH? NO PROBLEM!**

# 100 Best Freebies

- Free software
- Free services
- Free fun

Our expert  
guide to  
the best  
free stuff  
on the Web

## HOW TO:

- ➔ Turn Your **Vinyl LPs**  
& **Audiocassettes**  
into MP3s
- ➔ Create a **Super**  
**Video CD** That  
Plays Like a DVD
- ➔ Play **Dance Dance**  
**Revolution** on  
Your Mac

## REVIEWED

◀ Pentax Optio 430RS, Apple 20-inch Cinema Display, Universal Media Drive,  
15GB iPod, Master of Orion 3, PowerWave, World Book 2003 Jaguar Edition,  
Mercury Elite Pro FireWire 800 drive, Canon i950 Photo Printer, and much more...





# mac warehouse®

Help is on the house.™



**FREE!**  
**20GB iPod!**

With purchase of a Power Mac G4,  
a 20-inch or 23-inch LCD display  
and AppleCare Protection Plan.



**Work & Play Bundle  
with 20-inch Monitor**

- Power Mac® 1.42GHz Dual G4 with 512MB RAM/120GB Hard Drive/SuperDrive™
- Apple 20-inch LCD display
- AppleCare Protection Plan
- **FREE! 20GB iPod™**

BND5318 .....\$4239.85

**Work & Play Bundle  
with 23-inch Monitor**

- Power Mac® 1.42GHz Dual G4 with 512MB RAM/120GB Hard Drive/SuperDrive™
- Apple 23-inch LCD display
- AppleCare Protection Plan
- **FREE! 20GB iPod™**

BND5319 .....\$4939.85



**Our Tech Support specialists  
are on-call to provide you with  
expert operational advice FREE  
for the lifetime of your products.**

These specialists hold industry certifications  
on the latest technology from the leading  
manufacturers, including:

A+ Certified

Adaptec Certified

AMD Direct Pro

Apple Earn & Learn

Apple Certified Desktops

Apple Certified PowerBooks

Apple Certified Laserwriters

IBM PSS

McAfee TVD



Chris  
Mac Warehouse  
Technical Support Manager



**Call us today!**

**800-ALL-MACS**

(800-255-6227)

**macwarehouse.com**

For Canadian inquiries and orders  
please call 877-375-4210



# DROP IN TO THE ULTIMATE CHALLENGE



## TONY HAWK'S PRO SKATER 4

- explore enormous levels
- interact with the environment like never before
- new challenging goals and objectives



BLOOD  
COMIC MISCHIEF  
MILD LYRICS  
SUGGESTIVE THEMES



ASPYR™  
www.aspyr.com



© 1999-2002 Activision, Inc. and its affiliates. Published and distributed by Activision Publishing, Inc. Activision and Pro Skater are registered trademarks and Activision 02 and Sports Revolution are trademarks of Activision, Inc. and its affiliates. All rights reserved. Tony Hawk is a trademark of Tony Hawk, developed by Neversoft Entertainment, Inc. All rights reserved. The ratings icon is a registered trademark of the Interactive Digital Software Association. The Aspyr logo is a trademark of Aspyr Media, Inc. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other trademarks and trade names are the property of their respective owners.



## features

### 16 Listen Up!

After days of downloading tunes from Apple's iTunes Music Store—and running up our company credit card—we report on iTunes 4, the new iPods, and Apple's foray into the music biz. **by the MacAddict staff**



### 20 100 Best Freebies

Who says you can't get somethin' for nothin'? Not us. We combed the Web and found the 100 best things that zero money can buy. **by David Weiss**



### 32 The Hulk

In our exclusive interview, the magicians at Industrial Light + Magic talk about how one little computer (the Mac) helped create one massive superhero. **by Kris Fong**

### 39 Inside the 17-Inch PowerBook

We open up the world's largest laptop and show you the deep, dark innards of this industrial-design wonder. **by Niko Coucouvanis**



**Sadly, the Menu button doesn't access Pizza Hut.**

## how to

#### 58 Ask Us

Turn printing into an AirPort Extreme sport, make those cute little URL icons, access Hotmail from Apple Mail, and run Software Update from the Terminal.

#### 60 Digitize Vinyl and Audiocassettes

We bought Black Sabbath's *Paranoid* LP years ago—must we now buy its digital equivalent just to stick it on our iPod? Not if we do the digitizing ourselves. **by Kris Fong**



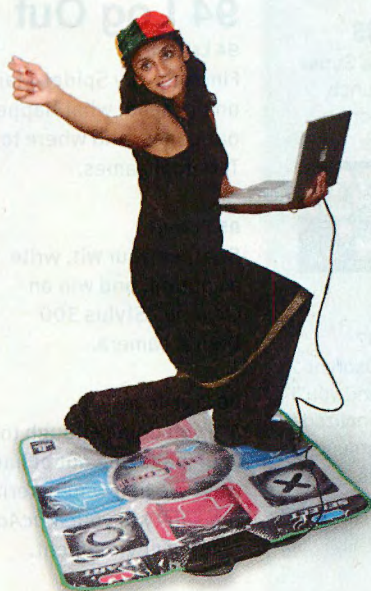
#### 66 Create a Super Video CD

In the April issue, we showed you how to create a Video CD. Now we show you how to play your own iMovies on a DVD player and get near-DVD quality—all from a measly CD-R. **by Andrew Tokuda**



#### 68 Play Dance Dance Revolution on a Mac

Don't risk an Elaine Benes dance moment in front of the local mall rats. Thanks to the work of a team of open-source developers, you can play Dance Dance Revolution on your Mac. Find out how. **by Chris Barylick**



**Do not play twister with her.**



# every month

## 8 Editors' Page

There's more to Apple's new music service than simply downloading tunes into iTunes.

## 10 Get Info

Apple busts out three new pro video apps; Palm takes pictures; Painter turns (version) 8. Plus, get your red-hot EverQuest tips right here.

## 41 Reviews

- 44 15GB iPod MP3 player
- 45 20-Inch Cinema Display LCD monitor
- 54 d2 DVD-RW FireWire 400 DVD-RW drive
- 50 Enigma 1.1 3D puzzle game
- 55 FireWire Dino FireWire 400 hub
- 46 i950 Photo Printer six-color inkjet printer
- 48 InTools 1.0 Adobe InDesign plug-ins
- 54 iPod Armor iPod case
- 52 Mac FlipAlbum 3 photo-presentation software
- 49 Master of Orion 3 strategy game
- 53 Mercury Elite Pro FireWire 800 hard drive
- 47 Optio 430RS 4-megapixel digital camera
- 50 PowerWave USB audio interface and amplifier
- 54 Presentation Remote presentation controller
- 55 TextWrangler 1.0 text editor
- 55 Universal Media Drive memory-card reader
- 45 Wireless Optical Desktop Special Edition keyboard and mouse
- 52 World Book 2003 Jaguar Edition electronic encyclopedia
- 51 Xenofex 2 Photoshop plug-in suite



55

Fully poseable FireWire hub.  
Does not require batteries.



53

## QUICK TIPS FROM THIS MONTH'S ISSUE

### ➔ BOOST YOUR TURNTABLE SIGNAL

To record vinyl to a Mac, you need to connect your turntable to either a stereo receiver or a preamp to boost the signal levels properly. Trust us—if you don't, your recording will sound like crap. **From "Digitize Vinyl and Audiocassettes," p60**



### ➔ SHUT DOWN FROM THE TERMINAL

To shut down your Mac from the Terminal's command line, use the halt command. If you're not already logged in as root, type `sudo halt`, then your password. **From "Ask Us," p58**

### ➔ RUN QUARTZ EXTREME ON A PCI VIDEO CARD

Apple says you can't benefit from Quartz Extreme unless you have an AGP video card, but you can. If you have the right

card, just install a copy of PCI Extreme, and you're all set. **From "100 Best Freebies," p20**

### ➔ ADD NUMBERS TO MENUS

To jump from scene to scene in a Super Video CD (SVCD), users must punch the appropriate scene numbers on their remote. To make it easier for them, add those numbers to your SVCD menu. **From "Create a Super Video CD," p64**



### ➔ BOOST YOUR EGO

Feeling unloved? Unappreciated? Unwanted? Just log on to [www.usofyne.com](http://www.usofyne.com) and fill out a simple form, and you'll receive a personalized message guaranteed to lift your spirits. **From "100 Best Freebies," p20**



## 56 The Hot List

The best of the best from recent reviews. If the editors of MacAddict went shopping, this is what we'd buy.

## 94 Log Out

### 94 Letters

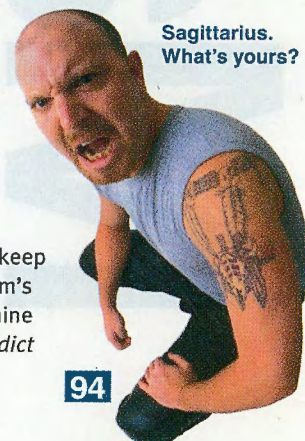
Find out why Spider-Man is wearing a paper bag on his head, what happens when you sweat on our pages, and where to find a hidden stash of Terminal games.

### 95 Contest

Sharpen your wit, write a caption, and win an Olympus Stylus 300 Digital camera.

### 96 Shut Down

Are you doing enough to keep your magazine out of harm's way? We help you determine the safety of your MacAddict reading environment.



Sagittarius.  
What's yours?

94



# The world's leading computer companies buy memory from us.



## Shouldn't you?

When you buy a memory upgrade from Crucial you're buying directly from Micron—one of the world's largest DRAM manufacturers and a major supplier to the global computing industry. Buying directly from the manufacturer gives you access to the highest quality products at the lowest possible prices, backed up by expert technical support and world-class customer service, and topped off with guaranteed compatibility and a limited lifetime warranty. It's that simple.

Order today and we'll ship it free!\*

**256MB PC2100 DDR**

**\$34<sup>99</sup>**

**for today's most popular systems**

**FREE SHIPPING\***



BizRate.com™

Order online:

**www.promo.crucial.com**

or call toll-free 1-888-363-2562

Key code: 1mad

**crucial**  
TECHNOLOGY  
A Division of Micron

**The Memory Experts™**

\*See Web site for details.

Prices may vary according to specific system requirements. The price listed was valid on 5/2/03 when we sent this ad to the publisher; however, prices may have dramatically increased or decreased since then. Visit the FAQ section of Crucial.com to learn more about why memory prices go up and down.

© 2003 Micron Technology, Inc. All rights reserved. Crucial, Crucial Technology, the Crucial Technology logo, and The Memory Experts are trademarks/service marks of Micron Technology, Inc. in the U.S. and outside of the U.S. All other trademarks are the property of their respective owners. Phone 208-363-5500. Fax 208-363-5501. E-mail crucial.sales@micron.com. Crucial Technology is not responsible for omissions or errors in typography or photography.



# the disc

## "Hulk Say Disc Good!"

Bruce Banner would never morph into the Hulk if he had this month's Disc. With its 60-plus ways to have more fun and be more productive, he'd be far too jolly to transmogrify into a decidedly unjolly green giant.

### Painter 8 trial

You don't need paint, brushes, or canvas for your next Van Gogh forgery—all you need is this ultracool app.



### The Making of the Hulk

In our video interview with the Mac masters behind the Hulk, learn about how director Ang Lee was inspired by Iowa wheat.



### Xenofex 2 demo

Try 14 cool Photoshop filters, including Mosaic, Puzzle, and one that makes your image look as if it were on an ancient computer monitor.



## on the Disc

### AUDIO & MUSIC

Audio In 1.0.3  
Audiocorder (Classic) 3.7.1  
Audiocorder (OS X) 3.7.1  
AudioFinder 2.0.5  
Blues Music 1.2  
Clutter 1.0d11  
Disco (Classic) 2.0  
Disco (OS X) 2.0  
Jasmine (OS 9) 1.5.7  
Jasmine (OS X) 1.5.7  
Sound Studio 2.1  
Studio365-Live demo

### DEVELOPMENT

REALbasic Classic 5.1.1 demo  
REALbasic OS X 5.1.1 demo  
TextWrangler 1.0 demo  
VLC Source 0.5.3

### FUN & GAMES

Arr 1.0  
Asteroid Storm 1.2.1  
Enigma 1.1.1 demo  
Pocket Tanks 1.00b  
pyDDR 0.6.2  
Samurai 1.0.1  
Squeaky Toy (Classic) 1.0  
Squeaky Toy Deluxe 1.0.1

### GRAPHICS & MULTIMEDIA

After Effects 5.5 *tryout*  
Flaming Pear Freebies 1.6  
Flaming Pear Freebies X 1.6  
GraphicConverter 4.6  
GraphicConverter X 4.6  
Icoformat 1.3f3  
InTools 1.0.1 *trial*  
Mac FlipAlbum 3 *demo*  
MissingMenuGen 1.0  
MissingMpegTools 0.9.1  
Montage with Ray Gun 1.1 *demo*  
Painter 8 *trial*  
Slick Sampler  
SpirographX 1.0  
Splat 1.0 *demo*  
Universe 5 *demo*  
VideoLAN Client 0.5.3  
Xenofex 2 *demo*  
Xinema 1.0.3

### INTERFACE

Duality 4.0 GT  
iX Screen Effects 1.2

### INTERNET & COMMUNICATION

ContentBarrier X *demo*  
NetBarrier X *demo*

### PRODUCTIVITY

Little Office 1.6

### UTILITIES

Carbon Copy Cloner 2.1.6  
Cocktail 2.1  
DiskTracker (OS X) 2.2.2  
DiskTracker (OS X) 2.2.2  
Font Explorer (Classic) 1.3  
Font Explorer (OS X) 1.0  
iBeeZz 1.5  
MacMaid 1.1.1  
MediaPipe 0.8.9r2  
PersonalBackup X *demo*  
Spy 1.1b1  
TinkerTool 2.32  
VirusBarrier X *demo*

### SPONSORS

DriveSavers: Lost Data *video promo*  
Intego: ContentBarrier X 10.0.1 *demo*  
Intego: NetBarrier X 10.1 *demo*  
Intego: PersonalBackup X 10.1 *demo*  
Intego: VirusBarrier X 10.0.1 *demo*  
REAL Software: REALbasic Classic 5.1.1 *demo*  
REAL Software: REALbasic OS X 5.1.1 *demo*

### UPGRADE

If you don't receive the Disc with your copy of MacAddict, you might want to consider upgrading. Each monthly disc contains cool demos, useful shareware and freeware, and the inimitable MacAddict Staff Video. To get 12 issues of MacAddict that include this value-packed disc with your subscription (prorated if necessary) for just \$1 more per issue, call 888-771-6222—the operator will take care of everything.

# MacAddict

PUBLISHER **Chris Coelho**  
EDITOR IN CHIEF **Rik Myslewski**

### EDITORIAL

MANAGING EDITOR **Jenifer Morgan**  
EXECUTIVE EDITOR **Cathy Lu**  
SENIOR EDITORS **Narasu Rebbapragada (news)**, **Kris Fong**  
ASSOCIATE EDITOR **Niko Coucouvanis (reviews)**  
EPONYMEDITOR **Max**  
CONTRIBUTING EDITORS **Raf Anzovin**, **Steven Anzovin**,  
**Joseph O. Holmes**, **Frank O'Connor**, **Angus Páidean**, **Ian Sammis**, **Deborah Shadovitz**, **Andrew Tokuda**, **Buz Zoller**

### ART

ART DIRECTOR **Christopher Imlay**  
ASSISTANT ART DIRECTOR **Peter Marshutz**  
CONTRIBUTING DESIGNER **Kevin Ashburn**  
PHOTOGRAPHER **Mark Madeo**

### PRODUCTION

PRODUCTION DIRECTOR **Richard Lesovoy**  
PRODUCTION COORDINATOR **Hans Hunt**

### ADVERTISING

EASTERN ADVERTISING DIRECTOR  
**Bernie Lanigan, 212-768-2966 x4001**  
WESTERN ADVERTISING DIRECTOR  
**Dave Lynn, 949-360-4443**  
NATIONAL ACCOUNT MANAGER  
**Nate Hunt, 415-656-8536**  
NATIONAL SALES MANAGER  
**Stacey Levy, 925-964-1205**  
SENIOR ACCOUNTS MANAGER, DIRECT SALES  
**Ana Epstein, 415-656-8416**  
AD COORDINATOR **Jose Urrutia, 415-656-8313**  
MARKETING MANAGER **Allison McCreery**

### CIRCULATION

GROUP CIRCULATION DIRECTOR **Tina Rodich**  
NEWSSTAND MARKETING MANAGER **Mimi Hall**  
BILLING AND RENEWAL MANAGER **Mike Hill**  
FULFILLMENT MANAGER **Angela Martinez**  
DIRECT MARKETING SPECIALIST **Mary Nicklin**



**Future Network USA**  
150 North Hill Drive,  
Brisbane, CA 94005

CHIEF EXECUTIVE/FUTURE NETWORK **Greg Ingham**  
PRESIDENT **Jonathan Simpson-Bint**  
VP/EDITORIAL DIRECTOR **Matt Firme**  
VP/CFO **Tom Valentino**  
VP/CIRCULATION **Holly Klingel**  
GENERAL COUNSEL **Charles Schug**  
PUBLISHING DIRECTOR **Simon Whitcombe**  
DIRECTOR OF CENTRAL SERVICES **Nancy Durlister**

Future was founded in the UK in 1985. Today it publishes over 60 specialist consumer magazines worldwide. It is the leading publisher of video games and home-computing magazines in the UK and Italy. The company also licenses 37 of its titles, resulting in over 60 local editions in a further 22 countries. Future employs more than 1,000 people in offices in Bath, London, San Francisco, New York, Paris, and Milan. The Company is listed on the London Stock Exchange (symbol FNET).

Tel +44 1225 442244 • www.thefuturenetwork.plc.uk  
Media With Passion  
Bath, London, Milan, New York, Paris, San Francisco

REPRINTS: For reprints, contact Reprint Management Services, Maggie French, 717-399-1900 x178 or mrfrench@reprintbuyer.com.

SUBSCRIPTION QUERIES: Please email mcdcustserv@cdsfulfillment.com or call customer service toll-free at 888-771-6222.

### Volume 8, Issue 7

**MacAddict** (ISSN 1088-548X) is published monthly by Future Network USA, 150 North Hill Dr., Brisbane, CA 94005, USA. Periodical-class postage paid at Brisbane, CA, and at additional mailing offices. Newsstand distribution is handled by Curtis Circulation Co. Basic subscription rates: one year (12 issues + 12 CD-ROMs) U.S. \$39.90, Canada \$43.95, U.S. prepaid funds only. Canadian price includes postage and GST 128220688. IPM 0962392. Outside the U.S. and Canada, price is \$53.95, U.S. prepaid funds only. POSTMASTER: Send address changes to MacAddict, P.O. Box 5126, Harlan, IA 51593-0626. Future Network USA also publishes *Maximum PC*, *PC Gamer*, *Official Xbox Magazine*, and *PSM*. Entire contents copyright 2002, Future Network USA. All rights reserved. Reproduction in whole or in part is prohibited. Future Network USA is not affiliated with the companies or products covered in MacAddict. Ride-Along enclosure in the following edition(s): A3, B1, B2, B3, B4. PRODUCED IN THE UNITED STATES OF AMERICA.



## The joy of six.



**John**  
Graphic Designer  
*Creates prepress  
automation  
programs*



**Angela**  
Scientist  
*Creates data  
analysis programs*



**Kyle**  
Teenager  
*Creates games  
instead of playing  
them*



**Kelli**  
Teacher  
*Creates educational  
software for her  
students*



**Barry**  
Programmer  
*Creates database  
applications*



**Jackie**  
Network Administrator  
*Creates her own  
network testing tools*

### Experience the joy of creation.

Wondering why these people look so happy? It's because they accomplished something they didn't think possible. They solved a problem using REALbasic, the powerful, easy-to-use tool for creating software for Macintosh® and Windows®. And you can too. With your ideas and REALbasic, you can increase productivity, speed up processes and simplify just about any aspect of your life or work. Whether you're a first-timer or an old pro, if you can think it, you can create it. Download your free demo from the MacAddict CD and join the growing number of very happy people creating countless solutions with REALbasic.

[www.realbasic.com](http://www.realbasic.com)  
**512/328.7325**



©2003 REAL Software, Inc.  
REALbasic is a trademark of REAL Software, Inc.  
All other names mentioned are trademarks or  
registered trademarks of their respective holders  
in the U.S. and other countries.

REALbasic is available at [www.realbasic.com](http://www.realbasic.com) and  
also at the Apple Store, CompUSA and Fry's.

 **REALbasic**

Create your own software.™





# Mo' Music

The iTunes Music Store is changing my life.



Right before Steve Jobs announced Apple's new iTunes Music Store to the assembled media horde, the PA in the auditorium was playing, fittingly enough, Bob Dylan's "The Times They Are A-Changin'."

They certainly are. The music biz will never be the same.

I've only spent a few hours exploring the Music Store, but despite its faults and limitations, it is, IMHO, the Best Thing Since Sliced Bread. See "Listen Up!" on page 16 for the official *MacAddict* take on the Store and its offerings—oh, and check

out our review of the new iPod on page 44.

Then download a free copy of iTunes 4, sign yourself up for a Music Store account, and stroll up and down the aisles of the Store. You'll find that it provides not only a convenient way to buy music, but also a great way to waste inordinate amounts of time enjoyably.

Want to compare different versions of old standards? Easy. Ask iTunes' Power Search to look for "Over the Rainbow," and you can listen to 34 different 30-second snippets, including versions by Kathie Lee Gifford, Louis Prima, and Plácido Domingo. Gershwin's "Summertime"? There are 67 versions—make sure to note the subtle differences between the styles of Kiri Te Kanawa and Rick Nelson.

Another highly entertaining time-waster is browsing your coworkers' playlists. iTunes is Rendezvous-aware, so if anyone on your network enables Share My Music in iTunes' Sharing preferences pane, his or her entire iTunes Library—or just the playlists that person wants to make public—will automatically show up in your iTunes Source window.

Without this handy feature, I wouldn't have known that *MacAddict* editor Narasu Rebbapragada is a fan of both Slayer and Johnny Cash. And I might never have discovered Dirt Bike Annie.

Or learned that Art Director Chris Imlay is heavily into both 1960s French pop and the Flaming Lips. Or, for that matter, my coworkers might never have discovered my Zappa addiction. They might even come to share my affection for Syrian dance-party tunes.

One thing's for sure, though: Thanks to the iTunes Music Store, we're all being exposed to far more music than we were a week ago. And that's mighty, mighty cool.

Enjoy, *Rk*

## from the editor's desktop

### MUSIC YOU WON'T FIND IN THE ITUNES MUSIC STORE

Although 200,000 tunes may sound like a lot, there's far more music *not* in the Music Store than in it. Here are a couple of other sources worth checking out.

**The Shaggs**  
[www.shaggs.com](http://www.shaggs.com)  
Astonishing. Indescribable. They were either primitive geniuses or simply very, very bad. If you've never heard "My Pal Foot Foot" or "Philosophy of the World," you owe it to yourself to meet the band Frank Zappa called "better than the Beatles."

**National Cleveland-Style Polka Hall of Fame**  
[www.clevelandstyle.com](http://www.clevelandstyle.com)  
The music of my people—a true gem. Seriously. I mean, where else can you find the lyrics to "Ej, Prijatelj" by Lojze Slak, or the insightful biographies of Jack "The Buddy Rich of Polkas" Tady and Frank "America's Polka King" Yankovic?

**Lookout Records**  
[www.lookoutrecords.com](http://www.lookoutrecords.com)  
Some bands don't have major contracts because they're not good enough. Others don't because they prefer to remain independent. Lookout Records is home to more than 100 of the latter—OK, and also a couple of the former.

**Digital Droo**  
[www.digitaldroo.com](http://www.digitaldroo.com)  
This one's simply a shameless plug for a friend. Digital Droo (aka former *MacAddict* editor Andrew Tokuda) hasn't made it big yet, but he will...oh, he will. Listen to his stuff now so you can one day say "I knew him when."

## STAFF RANTS

**Q:** What will people learn about you when they browse your iTunes library?



**Narasu Rebbapragada** DDR QUEEN  
What will people learn about you when they browse your iTunes library?  
That I have an incurable weakness for bouncy Latin pop music.



**Niko Coucouvanis** EREMITICIST  
What will people learn about you when they browse your iTunes library?  
That I'm generally antisocial. Now go away. But not too far.



**Kris Fong** CAST-IRON MAIDEN  
What will people learn about you when they browse your iTunes library?  
Probably that I'm a metal head at heart—I keep the really incriminating stuff well hidden.



**Cathy Lu** PEARL JAMICIST  
What will people learn about you when they browse your iTunes library?  
That it's a sad statement of how stuck I am in the 1980s and early 1990s.



**Jennifer Morgan** PRESIDENT, DR. TEETH FAN CLUB  
What will people learn about you when they browse your iTunes library?  
That *The Muppet Movie* still has a place in my life. I'm still looking for that Rainbow Connection.



**Chris Imlay** TOUCHY ARTSY GUY  
What will people learn about you when they browse your iTunes library?  
That I am an intolerable bastard. That the music I like is as annoying as I am.

There's a new member of the *MacAddict* Brotherhood. Meet Assistant Art Director Peter Marshutz, formerly of *BusinessWeek* and the British-American Chamber of Commerce. But don't let his stuffy credentials fool you—he fits right in with our loony crew: He's equally insane.



**Peter Marshutz** ANOTHER TOUCHY ARTSY GUY  
What will people learn about you when they browse your iTunes library?  
I'm slim, trim, and tough—able to manage many lists and tasks while on the go, never tripping, skipping, or missing a beat.



**Max** DISSIMULATIONIST  
What will people learn about you when they browse your iTunes library?  
That I have never, ever used Napster, LimeWire, or Drumbeat to download free music from the Web. And that I'm a pathological liar.



MEDAL OF  
HONOR  
ALLIED ASSAULT

FIRST EDITION

CENTRAL EUROPE

# SPEARHEAD

EXPANSION PACK

## LAUNCH YOUR NEXT ASSAULT.

- All-new Russian and British weapons including smoke grenades and heavy artillery.
- Nine single-player levels from Normandy to Berlin.
- 12 new multiplayer maps spanning the European Theatre of Operations.



ASPYR™

Authorized Electronic Arts™ Distributor



Violence

©2003 Electronic Arts Inc. Electronic Arts, Medal of Honor Allied Assault, EA GAMES and the EA GAMES logo are trademarks or registered trademarks of Electronic Arts Inc. in the U.S. and/or other countries. Medal of Honor is a trademark or registered trademark of Electronic Arts Inc. in the U.S. and/or other countries for computer and video game products. All rights reserved. EA GAMES™ is an Electronic Arts™ brand. The Aspyr logo is a trademark of Aspyr Media, Inc. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. All other trademarks are the property of their respective owners. Made in the U.S.A.



the news of the month in bite-size chunks

## APPLE'S ALL-STAR LINE UP

### Pro Video Apps for Movie Pros



Those of you working in multimedia or film: Feel special. Apple loves you. It has announced revamps of three pro apps—Final Cut Pro 4, Shake 3, and DVD Studio Pro 2—with new features designed to woo high-end broadcasters. Combined with Apple hardware, they are positioned to give their hardware-based competitors a one-way ticket to Obsolete-ville.

#### Final Cut Pro 4

The biggest news is Final Cut Pro 4 ([www.apple.com](http://www.apple.com), \$999), the latest rev of Apple's popular nonlinear video editor, due out in June 2003. Apple has overhauled the app to make it more attractive to professional broadcasters, letting you view real-time video effects on an NTSC monitor without having to render first. (Final Cut Pro 3 currently has no real-time NTSC preview capability.)

Type types will like Final Cut's new LiveType, which lets you enter and style

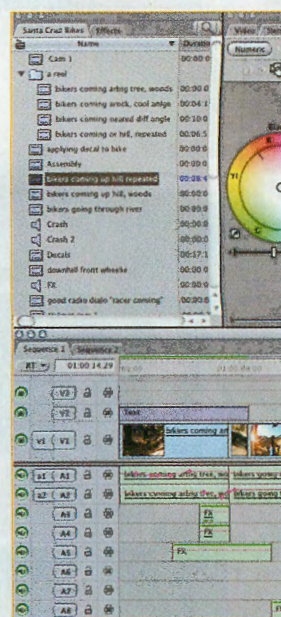
animated text quickly and easily. It's based on Apple's new LiveFont standard, which supports a 32-bit alpha channel so you can key in text over video. You can tweak individual characters, view your work in a wireframe view, and share effects between projects. To get you started, Final Cut comes with some free fonts and animated object styles. If LiveType looks familiar, it's because it used to be called India Pro. Apple purchased the titling tool from Prismo Graphics back in June 2002.

Rounding out the new video features is a new multichannel, onscreen audio mixer for adjusting volume and fades. Final Cut also comes bundled with Soundtrack, a stand-alone app that lets you combine and arrange looped music to create royalty-free soundtracks. As with LiveType, Apple includes royalty-free instruments, sound effects, and plug-ins to get you started.

No software upgrade would be

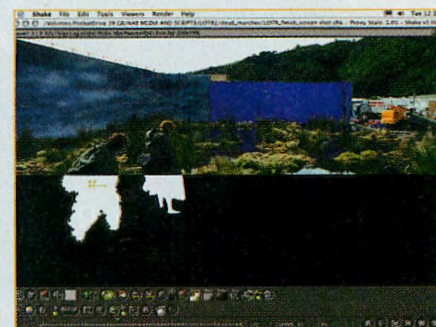
complete without a productivity boost. To that end, Apple lets you customize keyboard shortcuts (à la QuicKeys) and export your keyboard layout to other Final Cut Pro 4 users.

A few other enhancements that will appeal to professional film broadcasters are the 8- and 10-bit uncompressed YUV HD and SD codecs, the Compressor MPEG-2 encoder for creating high-quality DVDs, and high-end color-correction tools to fix lighting inconsistencies. Apple now bundles Cinema Tools (previously sold separately for \$799) for those who want to digitize their film and 24P HD video for editing in Final Cut Pro 4.



#### Shake

It's hard for most Mac users to wrap their heads around Shake (\$4,950, [www.apple.com](http://www.apple.com)) and its importance in



Compositing and effects program Shake 3 speeds up rendering.

#### STAR USERS

Bigwigs who use Final Cut Pro, DVD Studio Pro, and Shake. Just to give you an idea of how big Apple's pro users can be.



FILM	Full Frontal	Lord of the Rings	Nine Inch Nails Live DVD
MADE WITH	Final Cut Pro	Shake	DVD Studio Pro





## Maybe Jobs's own Pixar Studio can join us on the Mac side.

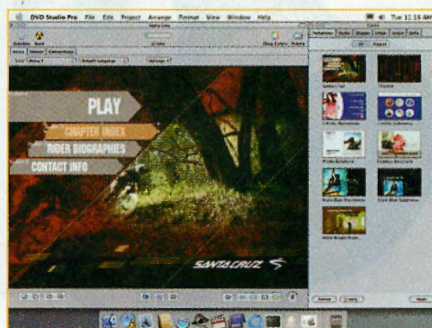


### Final Cut Pro 4 gets new audio and video boosts.

## DVD Studio Pro 2

And for those crafting DVDs, Apple has revamped DVD Studio Pro 2 (recently reduced to \$499 from \$999, [www.apple.com](http://www.apple.com)) with more of those loveable (and customizable) background templates. The new Menu Editor lets you do more interface work within the app itself with tools for designing text, buttons, and menus. Plus, context-sensitive drop palettes let you more easily create new tracks, link to tracks, make slide shows, and manage chapter indexes—all without having to make repetitive forays into menus. The newly designed track editor, based on Final Cut Pro's timeline, lets you work with up to eight video angles, eight audio tracks, and 32 subtitles. DVD Studio Pro also includes the Compressor batch-transcoding tool. DVD Studio Pro 2 is due out in August 2003.

Now that these new pro apps—when added to Power Mac G4, Xserve, and Mac OS X systems—have completed Apple's comprehensive high-end video system, maybe Steve Jobs's own Pixar Studio (rumored to run on Linux and Silicon Graphics workstations) can join us over on the Mac side.—NR



DVD Studio Pro 2 gets new backgrounds.

the professional film world, but Apple's acquisition of it from Nothing Real back in February 2003 was a huge deal. Essentially, Shake is the industry-standard compositing and effects program used on major motion pictures such as *Lord of the Rings*. (See "Star Users" for more on Apple's celeb clientele.) It can do anything from adding backgrounds and computer-generated characters to moving video, removing flaws, and fixing color—all to make movies look spectacular yet realistic.

Rendering video with special effects takes a lot of processing power, so the name of the game is speed. With Shake 3, Apple has added jet engines. Shake 3 will still support Irix (from Silicon Graphics) and Linux platforms; however, Shake 3's bundled Qmaster rendering-management software for Mac OS X only and has been specially configured to boost the rendering speed of Power Mac G4 and Xserve clusters. It should be available in June 2003.

SCREENSHOTS AND PHOTOGRAPHY COURTESY OF APPLE

## NEW STUFF

### TIVO FOR MAC

#### TiVo Home Media Option

\$99

Available: Now

[www.tivo.com](http://www.tivo.com)

Now TiVo Series2 subscribers can use their TVs to view photos and listen to music stored on their Macs. The new TiVo Home Media Option connects TiVo Digital Video Records to wired and wireless Mac networks and remotely schedules same-day TV shows.

### YOUR INTERNET RADIO STATION

#### Studio365-Live for Mac

starts at \$4.95 per month

Available: Now

[www.live365.com](http://www.live365.com)

With the Studio365-Live for Mac app, you can upload your MP3s and iTunes playlists to the Live365 network and broadcast them to Live365 listeners. The Intro Broadcasting Package (\$4.95) gets you 100MB of server space. The Premium Broadcasting Package (\$14.95 per month) adds live broadcasting.



The Pro Broadcasting Package (\$75 per month and up) is for commercial use.

### 1GHZ UPGRADE CARD

#### 1GHz Sonnet Encore/ZIF Upgrade Card

\$699.95

Available: Now

[www.sonnettech.com](http://www.sonnettech.com)

Sonnet unleashes a new 1GHz upgrade card for Macs with ZIF processor sockets. That means beige Power Mac G3s, although upgrades for Blue-and-White G3s and PCI graphics G4s are expected soon.

### INKJET MULTIFUNCTION PRINTER

#### Brother MFC-4820c

\$299.99

Available: Now

[www.brother.com](http://www.brother.com)

The latest multifunction printer comes with a four-color inkjet printer, 600-by-2,400-dpi color flatbed scanner, fax machine, and built-in answering machine. Plus it prints directly from popular digital-camera media formats such as CompactFlash, SmartMedia, and Sony Memory Stick.





## DROOLWORTHY

Sexy Stuff We Can't Wait to Get Our Mitts On

## ← Palm Camera

Palm Zire 71

James Bond would love the Palm Zire 71 (\$299, [www.palm.com](http://www.palm.com)), a PDA with a spylike built-in digital camera. Just slide the device open, and the Zire 71 turns into a camera that can take up to 640-by-480-pixel pictures. The Zire 71 also plays MP3, Real Audio, Audible content, and videos via the included Kinoma Player.—CL

PHOTOGRAPH COURTESY OF PALM

## All-Purpose Camcorder ↓

Canon Optura 20 DV

With its Super Night and Low Light modes, Canon's new sub-\$1,000 video camera (\$999, [www.canondv.com](http://www.canondv.com)) lets you lurk in the dark taking all sorts of video and adding digital effects such as wipes, fades, black-and-white tone, and sepia color. The camera also doubles as a 1.33-megapixel still camera with a 16x optical zoom lens and MMC and SD card slots for storing your pictures.—NR



PHOTOGRAPH COURTESY OF CANON

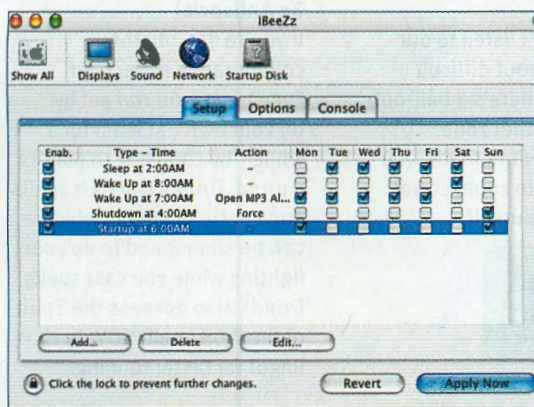


## SHAREWARE PICK OF THE MONTH

## iBEEZZ

Olivier Delécluse •  
<http://ibeezz.reboute.net> • \$10

Imagine waking up each morning to a QuickTime movie of birds tweeting, traffic beeping, or your boss screaming. Whatever your pleasure, iBeeZz can help you out by scheduling what time your Mac starts up, shuts down, restarts, sleeps, and wakes up. This Mac OS X Cocoa app can launch files, applications, and AppleScripts, so you can turn your Mac into an alarm clock and let it conduct other time-consuming tasks unattended.—*Andrew Tokuda*



iBeeZz tells your Mac when to turn on, turn off, go to sleep, and wake up.

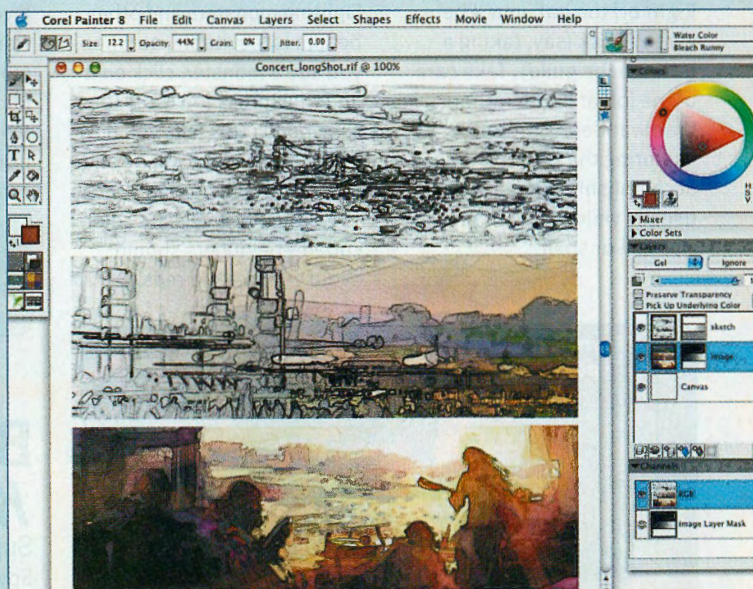
WHAT'S NEW  
IN PAINTER 8

## Corel Adds More Fine-Art Features

Corel's Painter 8 (\$299, [www.corel.com/painter](http://www.corel.com/painter)), due out in May 2003, adds more natural-media tools for fine artists who paint and draw on the Mac. Its new Mixer palette lets you swoosh together colors as you would on a traditional paint palette. A new Brush creator complements the 400 brushes Corel already gives you. The Sketch effect converts photos to line drawings, and the Digital Water Color feature gives you watercolor powers. Corel also revamped Painter's interface, upped support for Photoshop files, and added a Tracker palette for remembering recently used brushes.—*NR*



The new Mixer palette offers an intuitive way to mix colors.



Corel's Painter 8 is one of the most comprehensive painting apps around.

## NEWS OF THE MONTH

A FLOPPY  
DISK RAID

Mac users do the darndest things. Daniel Blade Olson used a Bondi Blue iMac (updated to 500MHz), five-connected 1X USB floppy disks, and Mac OS X's Disk Utility to create a floppy disk RAID with a whole 3.9MB of storage space. Check out his work at <http://ohlssonvox.8k.com/fdd RAID.htm>.

## NEW MAC CLONE

Enterprising engineer John Fraser plans to produce a Mac clone that's come to be known as the iBox, an economically priced box that doesn't include an LCD screen and is priced below Apple's current iMacs. Fraser's Web site (<http://2khappyware.com>) says that Other World Computing ([www.macsales.com](http://www.macsales.com)) pledges to sell the iBox should the project come to fruition.

APPLE STORE  
IN JAPAN

Bloomberg and Nikkei English News report that Apple will be opening its first official Apple Store in Tokyo later this year in the chic Ginza shopping district.

CHECK .MAC  
FROM WAP

A company called WAPMac ([www.wapmac.com](http://www.wapmac.com)) is offering a service that allows you to check your .Mac mail account on your WAP-enabled mobile phone. Go to <http://wapmac.com/mac> using your mobile phone's browser to sign up. Checking your mail is free. Sending it costs a one-time-only \$15.





# NEW TO EVERQUEST?

## Tips on Surviving the Mania

EverQuest, the PC's massively popular massively multiplayer online role-playing game, is coming to the Mac. If you're nervous about playing alongside rabid EverQuest veterans, heed the following advice of the Mac port's lead programmer Westlake Interactive President Glenda Adams, who's spent the last year playing the game.—CL

**EverQuest**  
Sony Online Entertainment  
[www.everquest.com](http://www.everquest.com)  
Price TBD  
Available: Summer 2003

### Do Your Chores

Right off the bat, you'll be given a task (say, taking a letter to the guild). Take care of the job at hand, rather than wandering around exploring the world, because accomplishing the task will usually yield you your first weapon or spell.

### Pick Your Beast Battles

Fighting monsters and other beasts is inevitable, so when you see a monster, click on it and then press the C key to *consider* it. This tells you how difficult your fight will be and how well you'll probably fare. The difficulty levels are color-coded—beginners should avoid yellows and reds.

### Run Away

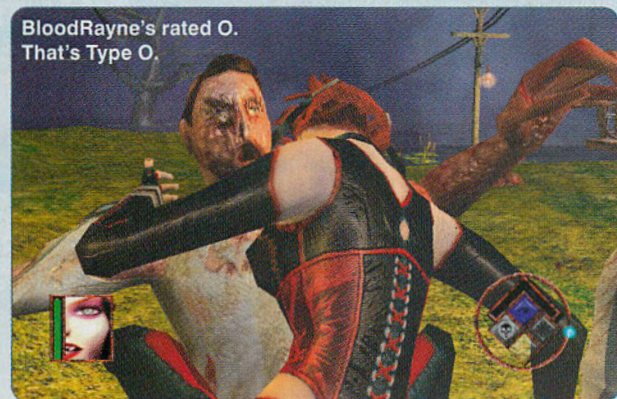
If you didn't listen to our warning about difficult monsters, here's a bail-out: Run to another zone. Monsters won't follow you from zone to zone, so you can save yourself.

### Be Antisocial

If you're not into the collaborative aspects of EverQuest, you *can* get by on your own—at least for a while—by choosing to play as a druid. Druids can cast spells and control animals, which can be summoned to do your fighting while you cast spells. Druids also possess the Spirit of the Wolf spell (SOW in chat lingo) for faster running.



Beasts abound in the wide worlds of EverQuest. Team up with other players to defeat the real bad-asses.



BloodRayne's rated O.  
That's Type O.

## BLOODRAYNE: ACTION, ADVENTURE, BLOOD

Vampire Vixen Sinks Her Teeth into Mac OS X

In this gothic third-person action shooter, you play Agent BloodRayne, a sexy half-breed vampiress on a mission to stop Nazis from dabbling in the occult.

**BloodRayne**  
Aspyr  
[www.aspyr.com](http://www.aspyr.com)  
\$29.99  
Available: Now

Your main weapons for dismembering your foes are scythelike blades attached to your arms. Submachine guns, pistols, and harpoon-style knives also come in handy.

Agent BloodRayne enjoys inhuman agility, superspeed, enhanced vision, and bullet-time slow-mo speed (à la Max Payne). She also feeds on blood, which (naturally) gives her übervampire abilities.—Matt Osborn

## BETTER THAN KNIGHT RIDER

Supercar Goes Spy Hunting

SpyHunter, a remake of the 1980s classic arcade hit, speeds to the Mac with guns blazing. In this game, you fight an evil megalomaniac corporation with the aid of a high-tech, high-speed vehicle called the G-6155 Interceptor, which morphs from a car into a motorcycle, jet ski, or speedboat—depending on your terrain. Blow away enemy cars, boats, and helicopters using offensive (machine guns) and defensive (oil and smoke) weapons, and of course, your trusty weapons van. As of press time, no online or multiplayer details had been released.—MO

**SpyHunter**  
Aspyr  
[www.aspyr.com](http://www.aspyr.com)  
\$29.99  
Available: Now



Make David Hasselhoff proud.





**THE TOURNAMENT RETURNS TO MACINTOSH JUNE 11**



[www.macsoftgames.com](http://www.macsoftgames.com)



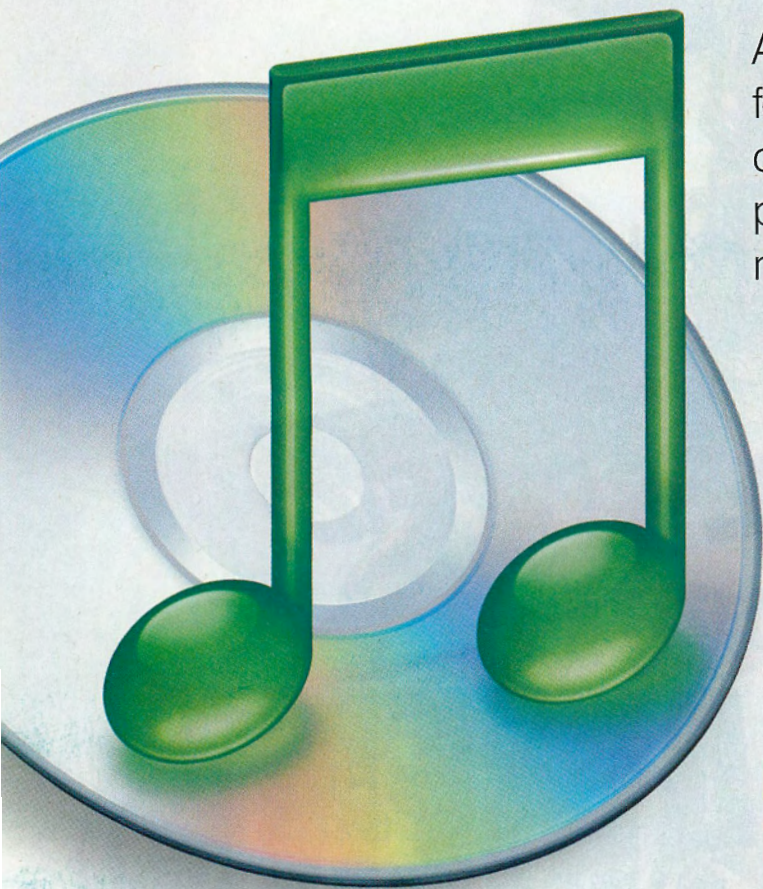
BLOOD AND GORE  
VIOLENCE



**MacSoft**

Unreal® Tournament 2003 Copyright 2002-2003 Epic Games, Inc., Raleigh, NC USA. Unreal and the Unreal logo are registered trademarks of Epic Games, Inc. ALL RIGHTS RESERVED. MacSoft is a registered trademark and Destineer is a trademark of Destineer, Inc. All other trademarks and trade names are the property of their respective owners. Unreal Tournament 2003 was created by Digital Extremes in collaboration with Epic Games, Inc. The Macintosh version is manufactured and marketed by Destineer, Inc. under license from Epic Games, Inc. The Windows PC version is manufactured and marketed by Infogrames, Inc. under license from Epic Games, Inc. The Atari trademark and logo are the property of Infogrames.





Apple has always been at the forefront of innovation. But now it's done something no one thought possible: loosened up the stodgy music industry.



listen up!

by the MacAddict staff



A year ago, it seemed unlikely that the music industry and computer users could ever coexist. But with its new music service, Apple has shown that it can keep both record companies *and* music consumers happy.

First, Apple got what Steve Jobs calls the “Big Five” record labels on its side: BMG, EMI, Sony, Universal, and Warner. Then it built an absolutely killer online store that’s beautifully integrated with the new iTunes 4. Finally, it struck the right balance between consumers and uptight music companies, charging only 99 cents a track but limiting the buyer’s ability to pirate. To sweeten the deal, Apple tweaked the iPods that’ll carry all those tunes, making them thinner, lighter, and more droolworthy than ever.

Apple says it wants you to love music again. With the introduction of the iTunes Music Store, an updated iTunes, and better-than-ever iPods, it may have succeeded.

# iTunes Music Store

In an effort to obsolete illegal file-swapping services like LimeWire, Drumbeat, and the Mac-unfriendly Kazaa, Apple has thrown its hat into the music-delivery biz. Built into the new iTunes 4, the iTunes Music Store lets you buy individual songs and whole albums, a feat that could drive the drive to Tower Records into obsolescence.

Apple puts limits on what you can do with purchased music, but the restrictions are light—and they make sense. You’re free to burn tracks to CD as long as you change your playlist every ten burns. You can download your music onto an unlimited number of iPods and onto three authorized Macs. If you get a new Mac, you can move the authorization to the new machine.



The iTunes Music Store has exclusive Web pages, tracks, and videos from artists like U2 and Alicia Keys.

Through licensing arrangements with the Big Five (Steve Jobs has said that music from independent labels will come later), the iTunes Music Store launched on April 28, 2003, with 200,000 tracks. Individual 128-Kbps AAC-encoded songs go for 99 cents a track. (AAC is an MPEG-4 format that compresses files so they’re smaller than MP3s while maintaining excellent sound quality.) Albums cost \$10 and up. Apple’s one-click buying scheme means that the music you buy downloads instantly into a Purchased Music playlist, along with a thumbnail of the album cover.

## MINGLING WITH RENDEZVOUS

People using iTunes 4 on the same IP network can listen to each other’s music with the app’s new built-in support for Rendezvous, Apple’s technology that allows devices to automatically discover each other. All you have to do is go to iTunes Preferences, choose Sharing, and pick whether to share your whole library or just selected playlists. If they like what they see, Mac OS X users on the same network can listen to your streamed music (via the iTunes Source pane). Oh, and the key word here is *streamed*, not downloaded—that would be illegal.

**“I can mix and match the songs I like and feel that I’m giving back to the artist.”**  
—Josh Groban, opera vocalist

Now here’s something Apple neglected to mention: To stream music purchased from Apple, you have to give people authorization (and you’re only allowed three). Plus, you have to give them the password to your iTunes store account—make sure these are trustworthy friends.



In your iTunes Preferences, you can choose to share your music with others on your network.

## WHAT YOU CAN AND CAN'T DO

What’s unique about the service is that it balances the needs of music buyers with the messy issue of copyright protection. Freebie services like Gnutella and Kazaa operate on very shaky legal ground, while legitimate, subscription-based services like Pressplay (www.pressplay.com) and Rhapsody (www.listen.com) have yet to really take off. The Music Store, on the other hand, is an instant success—visitors downloaded over 1 million tunes in its first week of existence.



The iTunes Music Store offers a motley assortment of tracks.

## A NEW WAY TO SEARCH

In addition to seamless integration with iTunes 4, another nice feature of the Music Store is its browsability. You can search for music by song, album, artist, or genre. The browse feature,





The Music Store lets you browse music titles by category.

which lets you look for music by genre in a column view, is great if you don't know exactly what you're looking for. Also, you can play a 30-second preview of any tune just by double-clicking the song title.

While we dig the service—its ease of navigation, quick download times, and 99-cent price tags—we did find some stuff to complain about. First, you can't find *everything* the way you could with Napster (see "What Does 200,000 Songs Mean?" below). Plus, the service offers only a partial number of tracks from many albums, and some artists (such as Madonna) are absent altogether.

**"With the new technology, what is really happening is that the need for physical inventory is being quickly eliminated."**  
—Seal, rock artist

Of course, the Music Store is brand new. Apple says it will keep adding songs, as well as release a Windows version by the end of the year. Apple now treads where countless others flounder. Hopefully, its unique position—its ability to control the tunes, the software, and the hardware—is a winning combination.

## What Does 200,000 Songs Mean?

While it sounds like a lot, a collection of 200,000 songs isn't all that vast when you consider the number of songs out there, each with 50 renditions—plus remixes, remasters, live versions, acoustic versions...you get the picture. We put the variety of the iTunes Music Store's offerings to the test—to do that, *MacAddict* staff members searched for artists and songs in our own favorite genres of music.

### Classical

If you're shopping for classical music, the iTunes Music Store won't tempt you to reschedule your next trip to Tower Records. The selection is sparse: There's only one version of Beethoven's "Für Elise," for example, and neither Debussy's string quartet nor Ravel's blatant rip-off of it are available. Also, the per-song pricing structure doesn't make sense. Want to pay 99 cents for the 39-second "Procession of the Wise Elder" movement from Stravinsky's *Le Sacre du Printemps*? Didn't think so.

### Jazz

Shopping for jazz is a crapshoot—with emphasis on the word *crap*. Five Kenny G albums, no Anthony Braxton. Three Richard Elliot albums, no Rova Saxophone Quartet. To be fair, Archie Shepp and Kenny Garrett are well represented. Sun Ra even makes a brief appearance. But still...24 versions of "Georgia on My Mind" *not* including Ray Charles's?

### World

If your taste in world music runs to the slick, smooth, and commercial, you'll find a good selection, from Youssou N'Dour to Sheila Chandra—interesting, if not arresting. If you're looking for less-homogenized sounds, you're in for a letdown: no Fayrouz, no Lado—not even Ray Budzilek and His Cleveland All Stars, fer chrissake. On the bright side, King Sunny Ade's up there, and we're spared from Zamfir, King of the Pan Flute.

### Other

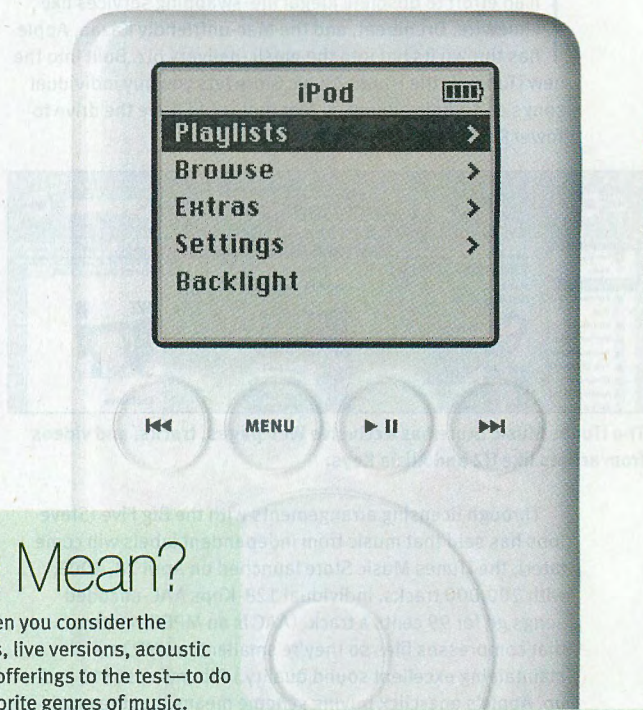
To sample the offerings in the gloriously vague genre of *Other*, we searched the Store for the kind of junk we used to look for on Napster (um, we mean the kind of junk *others* found on Napster). Soundtrack from the original *King Kong*? Nada. The Unseen's cover of "Beat It"? Nope. The Eric Cartman remix of "Smack My Bitch Up"? Um, no. But there's hope. Bowie's elusive "The Man Who Sold the World" is there, as is U2's first (and last decent) LP, *Boy*.

# New iPods

According to Steve Jobs, Apple has sold 700,000 iPods. If you're already the proud owner of one, we're sorry, because the new iPods are so cool that you'll want to upgrade immediately (see our review on p44). And this is why.

**More capacity** The new iPod comes in three models: 10GB, 15GB, and 30GB models (previously 5GB, 10GB, and 20GB). According to Apple, 30GB equates to 7,500 songs—more if all you listen to is punk.

**Lighter and thinner form factor** The 10GB and 15GB models measure .62 inches thin and weigh 5.6 ounces light (and we thought our original 1-inch-thick iPods were small). The 30GB iPod is .73 inches thick and weighs 6.2 ounces—unfortunately, hard drive space does have its price.



PHOTOGRAPHY COURTESY OF APPLE



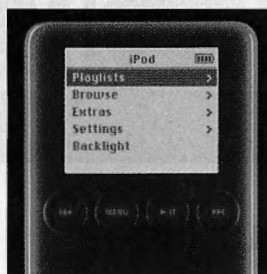


## IPOD STATS

Model	Number of Songs It Holds	What It Comes With	Price
10GB	2,500 (128-Kbps AAC format, 4-minute songs)	Earbuds, power adapter, FireWire cable, four-pin-to-six-pin FireWire adapter	\$299
15GB	3,700	Earbuds, power adapter, FireWire cable, four-pin-to-six-pin FireWire adapter, dock, carrying case, wired remote	\$399
30GB	7,500	Earbuds, power adapter, FireWire cable, four-pin-to-six-pin FireWire adapter, dock, carrying case, wired remote	\$499

**Solid-state buttons** You'll notice right away that the controls are located in a new place—above the scroll wheel. But what you can't tell from the pictures is that the buttons are now solid state (meaning no moving parts) just like the scroll wheel Apple introduced in the last generation of iPods.

**Backlighting** Not only does the screen have backlighting, but also the buttons light up red when backlighting is activated. Speaking of which, to turn it on you just hold down the Menu button for a couple of seconds or select Backlight from the new Main Menu (more on that later).




**Dock** While the new iPods still connect via FireWire, they now sport a dock connector instead of a FireWire port. You can plug the included cable into the connector on the bottom of the iPod, or into the new iPod dock. The dock also features a line-out port so you can hook it up to a stereo. Plus, there's more good news for Windows users: A \$19 cable set will sync your iPod to your computer via USB 2.0.

**On-The-Go playlists** You can now build a playlist on your iPod. Just highlight a song, album, playlist, or whatever—then press and hold the Select button to make that item appear in a playlist called On-The-Go.

**Personalized main menu** You can also personalize your main menu. Simply go to Settings > Main Menu, and toggle different options, such as Artist, Songs, and Contacts, on and off.

**AAC decoding** The new iPods support AAC decoding, which you need to play music purchased from the iTunes Music Store. Those of you with older iPods can play AAC files as well. Just update your iPod software to version 1.3 (available from [www.apple.com](http://www.apple.com)).

**Alarm clock and games** The new iPod can wake you up and entertain you even better than previous models. It has an alarm clock that beeps or plays a selected playlist, and it includes two new games: Solitaire and Parachute.

 The MacAddict editors are learning all kinds of blackmail-worthy info about what kinds of dorky music their coworkers like.

## Alternative and Hard Rock

The Store features a decent selection of bands, including where-are-they-now fogies like Depeche Mode, the B-52's, and Silverchair; Billboard chartsters like U2, Nirvana, and No Doubt; and recent artists such as Audioslave, Disturbed, and the Vines. Heck, we've gotta give Apple props for including some obscure stuff like Blue Murder and EdnaSwap. Who's absent? Linkin Park, Foo Fighters, and Red Hot Chili Peppers.

## Teen

Our researcher—an authentic 15-year-old girl—claims that the selection is erratic, but overall it's a great way to waste (uh, invest) Dad's money. Ja Rule, Coldplay, Eminem, System of a Down, and Nelly are all available, as are 50 Cent, Avril Lavigne, and Good Charlotte. Our opinionated expert was also pleased to see a total lack of Justin Timberlake.

## Classic Rock

The Music Store offers a wide variety of songs from many of the greats, from Eric Clapton to the Eagles, Van Morrison to Steve Winwood. However, a number of notables are missing: Queen, the Rolling Stones, Creedence Clearwater Revival, the Grateful Dead, and—gasp—the Beatles.

## Indie

To look up how well indie artists are represented, we checked out the Music Store's Alternative genre—the closest we could come to indie. Unfortunately, we found out that Alternative is an alternative to...well, not much. Here's a sampling: Hootie & The Blowfish, Pearl Jam, Tori Amos, Sheryl Crow, Lyle Lovett, Iron Maiden, and Dwight Yoakam. Art Director Chris Imlay says that if he'd stocked any of these in the Alternative section of the record store he used to work for, he'd have been fired. Still, Alternative is a good place to check out new stuff from former indie stalwarts who made the jump to major labels, such as the Flaming Lips or Built To Spill.



# one hundred BEST FREEBIES

Enhance your Mac—and your life—  
without spending a cent.



100 Best Freebies URLs,  
Asteroid Storm 1.2.1,  
Blues Music 1.2, Carbon  
Copy Cloner 2.1.6,  
Clutter 1.0d11, Flaming  
Pear Freebies 1.6, Font  
Explorer 1.0, iX Screen  
Effects 1.2, Little Office  
1.6, Slick Sampler,  
SpirographX 1.0, Splat  
1.0 demo, TinkerTool  
2.32, and Xlnema 1.0.3

Like a kid in a candy store, you're surrounded by tempting goodies every time you venture onto the Web. A ton of them are free. And free is good.

The problem is that scads of those freebies aren't worth downloading. There are a precious few, however, that can change your life for the better.

So how do you sort through this barrage of no-cost offerings?

Easy. You let us do it for you. Our expert team of picky penny-pinchers scoured the Web far and wide to bring you 100 free apps, add-ons, and services—each of them a treat, each of them tested and certified compatible with Mac OS 10.2.

Oh, and by the way, our definition of “free” includes donationware—freeware created by folks who will accept any monetary appreciation you'd care to shower upon them out of the goodness of your heart. We didn't, however, include shareware, which the authors *expect* you to pay for. (And remember: Not paying for shareware is double-plus uncool.)

With a Mac and a Web connection, the world is your digital oyster. So without further ado, here's the official *MacAddict* guide to the best 100 things out there waiting for you—all for the low, low price of zip, zilch, zero, nada.

by David Weiss



# Customization

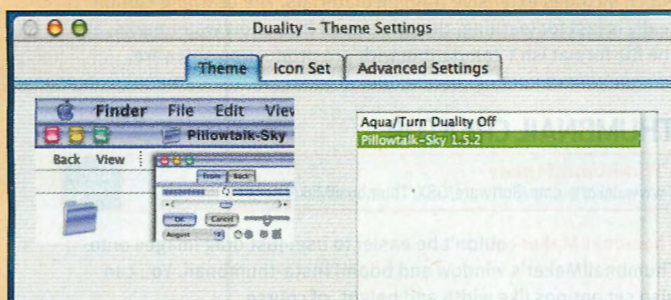
## MAC OS X THEME CHANGER

**TOP PICK**
**Duality**  
<http://conundrumsoft.com>

 Mac  
OS X

Apple doesn't encourage people to tinker with the look and feel of Mac OS X. But that didn't stop the Conundrumsoft folks from creating **Duality**, a utility that lets you replace your user interface with alternative themes.

Themes alter the look of windows, menus, icons, cursors, progress bars, and such. Duality makes it simple to switch from one theme to another, and to easily return to your original look, keeping a backup and offering a restore feature. Each time you launch no-cost Duality, however, you have to deal with a pop-up window asking you to upgrade to a Pro version—for a fee, natch.

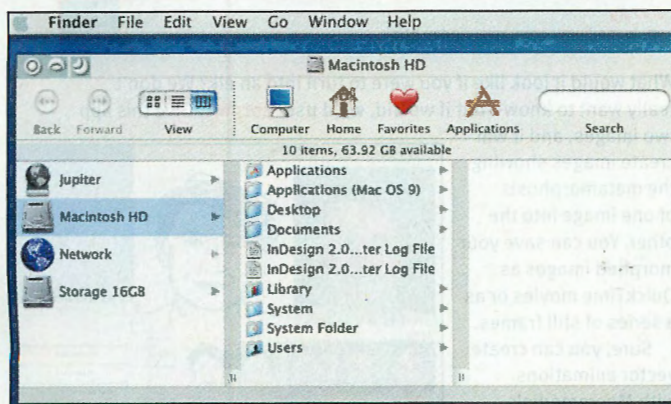


Duality puts a new face on your Mac.

## MAC OS X THEMES

<b>AquaWorld</b> <a href="http://www.stretch.tc/aquaworld/home/home.html">www.stretch.tc/aquaworld/home/home.html</a>	Mac OS X, donationware
<b>Max Themes</b> <a href="http://homepage.mac.com/max_08">http://homepage.mac.com/max_08</a>	Mac OS X, donationware
<b>Pillowtalk-Sky</b> <a href="http://lonestar.utsa.edu/lee/res/themes.html">http://lonestar.utsa.edu/lee/res/themes.html</a>	Mac OS X

Once you've installed Duality, you can download and use a stunning variety of Mac OS X themes. We recommend the site **AquaWorld**, which offers subtle and classy themes—if you're into subtle and classy. For example, the Underling theme turns your close, minimize, and maximize buttons into suns and moons, and ClearAqua makes your menus and title bars transparent.



The Underling theme from AquaWorld makes subtle but pretty changes to your windows and menu bar.

**Max Themes** is another good themes site. The Mac OS 9 Platinum theme will take you back to the good ol' days when you were young and innocent, and the Windows XP theme will probably tick you off. Finally, **Pillowtalk-Sky** is a purplish, candylike theme that will appeal to the bubblegum set.

## DESKTOP PICTURES

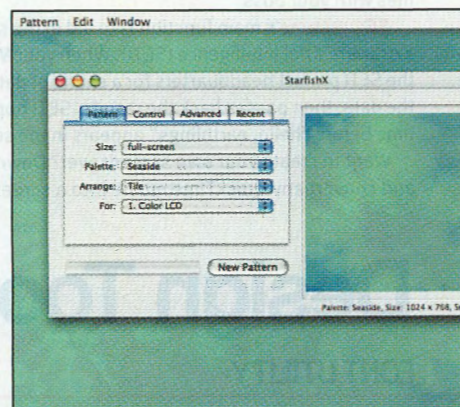
<b>Press Plus</b> <a href="http://www.pressplus.com/content/wallpaper">www.pressplus.com/content/wallpaper</a>	Mac OS 9 and OS X
<b>About This Particular Macintosh</b> <a href="http://www.atpm.com/5.11/desktop-pictures.shtml">www.atpm.com/5.11/desktop-pictures.shtml</a>	Mac OS 9 and OS X
<b>Digital Blasphemy</b> <a href="http://www.digitalblasphemy.com">www.digitalblasphemy.com</a>	Mac OS 9 and OS X
<b>StarfishX</b> <a href="http://homepage.mac.com/mscott/starfishx/starfishx.html">http://homepage.mac.com/mscott/starfishx/starfishx.html</a>	Mac OS X

Sometimes called *wallpaper* by folks on other platforms, desktop pictures are the ultimate way to make your Mac your own. Any image file that fits your screen's resolution will work as a desktop picture, but if you need help, the Web is there for you.

At **Press Plus** you can find stock photos of beaches, sunsets, and other natural surroundings, offered in resolutions of 1024 by 768 and 800 by 600 dpi. Similarly, at **About This Particular Macintosh**, you'll find 1024-by-768-dpi shots of the Bahamas, Niagara Falls, and other places you wish you were. **Digital Blasphemy** has images that verge on the phantasmagoric. Some images are free, and some require membership.

### StarfishX

generates random desktop patterns based on parameters you set, such as screen size, color palette, and tiling style. It takes a few minutes to do its work, but when it's done it immediately applies the new pattern to your desktop. It also saves the pattern, should you want to switch back to it after using a different one.



StarfishX whips up its own desktop images based on parameters you set.

## ICONS

<b>The Icon Factory</b> <a href="http://www.iconfactory.com">www.iconfactory.com</a>	Mac OS 9 and OS X
<b>pic2icon</b> <a href="http://www.sugarcubesoftware.com">www.sugarcubesoftware.com</a>	Mac OS X

When it comes to customizing your Mac, there's nothing like new icons. Just select a hard disk, folder, or file, then press Command-I, select the icon, and paste another icon right over it.

The **Icon Factory** has dozens of cool icons arranged on well-organized pages. Check out Xtra Drives, a set of Mac OS X hard-drive icons that'll deck out your disks in jaguar fur, cowhide, and other wacky textures (blame Apple for starting this animal-fur trend).

There are dozens of utilities to create your own icons, most of which cost at least a little money. But here's a tip: Create your own icon using Photoshop or another graphics tool, then convert it to an icon using **pic2icon**, which creates 128 by 128 Mac OS X icons from any image or folder of images.



Customization continued...

## SCREENSAVERS

<b>Steve Dekorte's ScreenSavers</b> <a href="http://www.dekorte.com/Software/OSX/ScreenSavers">www.dekorte.com/Software/OSX/ScreenSavers</a>	Mac OS X
<b>iX Screen Effects</b> <a href="http://illumineX.com/software/index.html">http://illumineX.com/software/index.html</a>	Mac OS X
<b>Fluid ScreenEffects</b> <a href="http://www.concepthouse.com/products/Fluid">www.concepthouse.com/products/Fluid</a>	Mac OS X, donationware
<b>SETI@home</b> <a href="http://www.setiathome.ssl.berkeley.edu/download.html">www.setiathome.ssl.berkeley.edu/download.html</a>	Mac OS 9 and OS X
<b>xbMovieMaker</b> <a href="http://perso.club-internet.fr/bgaufier/downloads.html">http://perso.club-internet.fr/bgaufier/downloads.html</a>	Mac OS X

No, you don't need a screensaver anymore; CRTs don't get burned by static images like they did when screensavers were first invented. But they're still fun.

One good place to find cool screensavers is **Steve Dekorte's** site. Our favorites include SkyFly, which shows a 3D landscape of grassy hills you can fly through with paper airplanes, and NeHe Particles, a shimmering, fairy-dust-like cloud of swirls.

Many of IllumineX's **iX Screen Effects** are geometric—reminiscent of screensavers of yesteryear—and include a (now retro) zooming-through-space screensaver that used to be all the rage. The iX Xirtam screensaver shows a Matrix-style shower of flickering green ASCII characters.

One awesome screensaver is **Fluid**, which slowly drowns your screen in liquid until it becomes a slowly undulating pool that's so mesmerizing you won't want to get back to work. See if that excuse flies with your boss.

**SETI@home's** main function is to aid in the search for extraterrestrial intelligence (SETI). When your Mac is idle, it contacts the SETI project headquarters for a chunk of data to crunch, processes the data, then passes back the results. SETI hopes it's only a matter of time before "hello, earthlings" appears in the sea of background noise.

Want to create your own screensaver? Download **xbMovieMaker**, and convert any QuickTime movie into a screensaver.

# Design Tools

## FONT UTILITY

### Font Explorer

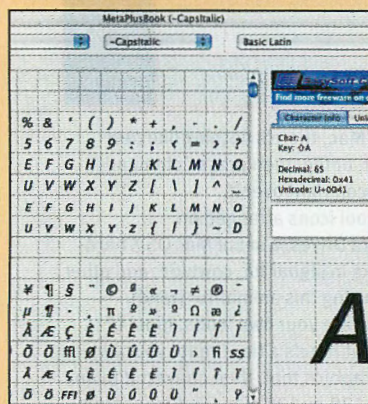
<http://pages.infinit.net/trottier/fexpl.html>

Mac OS 9  
and OS X

Apple's Key Caps utility shows you a map of your keyboard and how the characters change when you press modifying keys—but to

find out the key combinations for more-rare characters, you must resort to trial and error. Also, Key Caps can't tell you how to make the accent in café—very inconvenient if you run a French bistro.

So use **Font Explorer** instead. In a single window, Font Explorer shows you all of a font's characters, including punctuation, accents, and special characters. Just click a character, and Font Explorer tells you the magic key combo that creates it—even those pesky accents.



Font Explorer turns a font into a creative palette.

## HIGH-END 3D APP

### Maya Personal Learning Edition

[www.aliaswavefront.com](http://www.aliaswavefront.com)

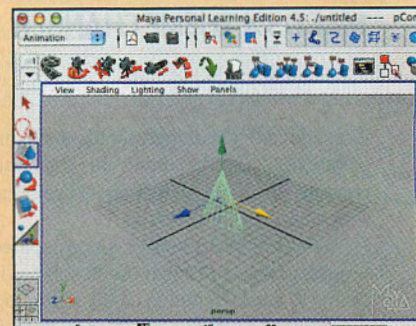
Mac  
OS X

TOP  
PICK

Maya is a 3D authoring tool with highly sophisticated animation skills. How sophisticated? You've probably seen a few of the movies in which this app has starred: *Spider-Man*, *Lord of the Rings*, and *Shrek*.

Now here's the cool part: You can check out this \$1,999 tool for free! Just download the **Personal Learning Edition**,

which includes extensive training materials. The Learning Edition really is just for learning, though; saved files show watermarks, and the file format isn't compatible with pro production software.



Maya Learning Edition is 3D boot camp.

## THUMBNAIL CREATOR

### ThumbnailMaker

[www.dekorte.com/Software/OSX/ThumbnailMaker](http://www.dekorte.com/Software/OSX/ThumbnailMaker)

Mac  
OS X

**ThumbnailMaker** couldn't be easier to use: Just drag images onto ThumbnailMaker's window and boom! Insta-thumbnail. You can also set options like width and height, of course.

## POSTSCRIPT INTERPRETER

### MacGSView

[www.cs.wisc.edu/~ghost/macgs/index.htm](http://www.cs.wisc.edu/~ghost/macgs/index.htm)

Mac OS 9  
and OS X

Occasionally, even shareware powerhouse GraphicConverter (\$35, <http://lemkesoft.com>) needs a little help opening files, particularly PostScript files from Quark, Illustrator, or InDesign. **MacGSView** converts EPS and other PostScript files into the rasterized information that GraphicConverter—or any other app that isn't PostScript-savvy—can understand.

## ANIMATION TOOLS

### MorphX

[www.orcooftware.com/~martin/Morph.html](http://www.orcooftware.com/~martin/Morph.html)

Mac  
OS X

### Cartoon Editor

[www.personal.utulsa.edu/~jeremy-wood/editor](http://www.personal.utulsa.edu/~jeremy-wood/editor)

Mac  
OS X

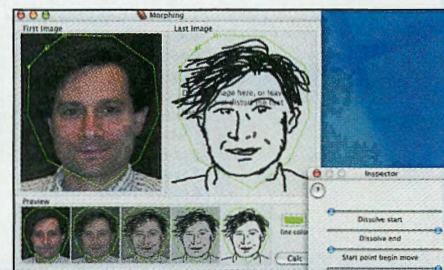
### Array

[www.mediumk.com/array/index.html](http://www.mediumk.com/array/index.html)

Mac  
OS X

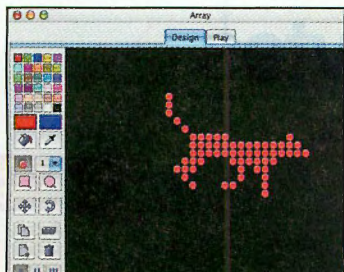
What would it look like if you were to turn into an elk? We don't really want to know—but if we did, we'd use **MorphX**. Give this app two images, and it will create images showing the metamorphosis of one image into the other. You can save your morphed images as QuickTime movies or as a series of still frames.

Sure, you can create vector animations with Macromedia's Flash MX—but that's for pros (and rich



MorphX can turn a human into a line drawing in five quick steps.





Array says it with Lite Brite. And nothing says *classy* like Lite Brite.

people). For the dabblers—and cheapskates—there's **Cartoon Editor**. It's got a humble-but-serviceable set of drawing tools and gradient effects, and it can handle animation, which you can save in QuickTime format.

**Array** helps you create any type of animation you want—as long as you want it rendered as Lite Brite pegs. True, Lite Brite doesn't have the most photorealistic resolution, but there's a lot you can do with

it—create a scrolling text effect or a movie marquee, for example. But please use this tool responsibly. We've seen a lot of bad Lite Brite images in our day.

## PHOTOSHOP ADD-ONS

### Flaming Pear Free Plugins

[www.flamingpear.com/download.html](http://www.flamingpear.com/download.html)

Mac OS 9  
and OS X

### Splat demo

[www.alienskin.com](http://www.alienskin.com)

Mac OS 9  
and OS X

### Sue Chastain's Photoshop Actions

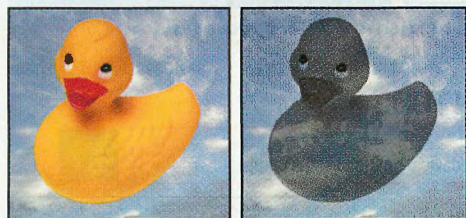
[http://graphicssoft.about.com/library/free/blfree\\_psactions1.htm](http://graphicssoft.about.com/library/free/blfree_psactions1.htm)

Mac OS 9  
and OS X

Plug-in filters add spice to Photoshop, but they often come at a price. Not the **Flaming Pear Free Plugins** pack. This baby offers cool, quirky

effects like **Ghost**, which turns a layer into a monochrome, transparent object similar to colored glass.

Alien Skin's **Splat** demo is a set of filters you can use for free, for 30 days. And in those 30 days you can do a lot of damage



Flaming Pear's **Ghost** plug-in can turn rubber duckies into ghost duckies.

with **Splat**, like using the **Frame** filter to create realistic frames and mattes, or adding decorative edge effects with the **Edges** filter.

**Sue Chastain**, card-carrying member of the National Association of Photoshop Professionals, has saved a few of her best moves as Actions, which the likes of you and me can download and run. Sue's Action Set provides some wacky 3D effects with type, while Sue's Cartoon Actions offer some inventive ways to turn photos into illustrations.

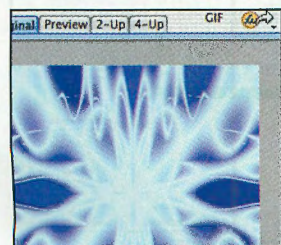
## MACROMEDIA FIREWORKS ADD-ONS

### Kaleidoscope

### Color Glow

[www.macromedia.com/cfusion/exchange/index.cfm](http://www.macromedia.com/cfusion/exchange/index.cfm)

Mac OS 9  
and OS X



**Kaleidoscope** is a Fireworks add-on that puts swirling colors in motion.

Macromedia's Exchange Web site includes a great collection of inexpensive and often free stuff from a large and growing network of users and third-party developers. Two of the great finds on the Fireworks Exchange are **Kaleidoscope**, which generates complex, colorful gradient patterns you can easily incorporate into your design as backgrounds or design elements, and the **Color Glow** effect, which turns up the heat on selected colors in existing images.

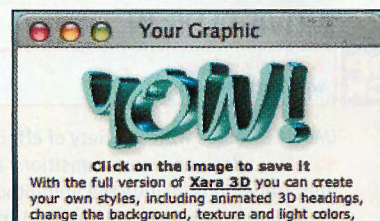
## ONLINE 3D TEXT TOOL

### Xara3D Sampler

[www.webpagedesign.com.au/heading.html](http://www.webpagedesign.com.au/heading.html)

Mac OS 9  
and OS X

If you're looking for a way to spruce up some boring ol' text, try turning it 3D. Just enter a word or phrase directly into the **Xara3D Sampler** Web site, and then choose fonts, colors, and styles to create a 3D version of your text. **Xara3D Sampler** will even create a .png file of your 3D text.



The **Xara3D Sampler** puts your message into 3D.

## IMAGE FINDER

### Peeper

[http://homepage.mac.com/petite\\_abeille/Peeper](http://homepage.mac.com/petite_abeille/Peeper)

Mac  
OS X

Drag any volume or folder into **Peeper**, and it searches through sub-folders, applications, and files, and digs out every (and we mean every) graphic—including images, icons, cursors, and tools. Click any image **Peeper** comes up with to get its file name, drag an image out of **Peeper** to copy it, or double-click to open it.

## FONTS, BACKGROUNDS, AND BUTTONS

### Free Mac Fonts

[www.freemacfonts.com](http://www.freemacfonts.com),

Mac OS 9  
and OS X

### Adobe Euro fonts

[www.adobe.com/type/eurofont.html](http://www.adobe.com/type/eurofont.html)

Mac OS 9  
and OS X

### AAA Buttons

[www.aaa-buttons.com](http://www.aaa-buttons.com)

Mac OS 9  
and OS X

### AAA Backgrounds

[www.aaa-backgrounds.com](http://www.aaa-backgrounds.com)

Mac OS 9  
and OS X

### Ambo Graphics

[www.ambographics.com](http://www.ambographics.com)

Mac OS 9  
and OS X

There are hundreds, nay, thousands of free fonts out there, but some font sites will bombard you with pop-up ads before you get near a single font, while others are Mac-unfriendly. Never fear. **Free Mac Fonts** shows you previews of Mac fonts on its very first page.

If you're using one of your old, old favorite fonts and you need to express a price in Euros, you may find that the font is Euroless. No problem—just download the free **Euro fonts** from Adobe. You'll get a serif, sans serif, monospaced, and bold Euro, all of which are neutral enough to blend in with most body fonts.

There's no paucity of free fonts, but there's even less of a shortage of free art on the Web—and most of it will make you wince. There are a few sites, however, that offer slick images, particularly for Web designers. At **AAA Buttons**, for example, you'll find a whole lotta buttons, many created with Aqua in mind. At **AAA Backgrounds**, you'll find cool abstract designs, simple textures, and faux effects, such as cloth. **Ambo Graphics** also has a great selection of artistic backgrounds, buttons, and bars.



You can download any of these backgrounds from **Ambo Graphics** for free—provided you use them on personal Web sites.



# iStuff for iApps

## iMOVIE PLUG-IN

TOP PICK

**Slick Sampler**  
[www.geethree.com](http://www.geethree.com)
Mac OS 9  
and OS X

iMovie 3 comes with a variety of effects, but Gee Three's **Slick Sampler** adds even more transitions and filters to Apple's DV-editing app. Transitions include the ubiquitous Barn Door (creates the effect of an opening-and-closing door), Drip (which looks like dripping paint), and four others.

Slick Sampler includes three filters. The Film Noise filter takes your clean, smooth DV footage and makes it look as though it were captured using an old 8mm camera—and it's more convincing than iMovie's Aged Film effect. Solarize blasts your clip with extra light. X-Ray doesn't show you the bones inside of your subjects, but it does turn clips into a spooky negative monochrome.



Slick Sampler's Burst transition puts more oomph in your iMovies.

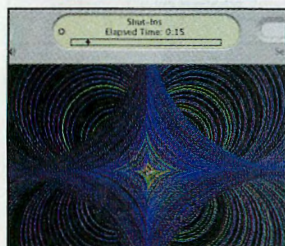
## iTUNES PLUG-INS

**Vortex**  
[www.trinfinitysoftware.com/vortex.shtml](http://www.trinfinitysoftware.com/vortex.shtml)

Mac OS X

**Fielder**  
[www.apple.com/downloads/macosx/audio/fielderitunesplugin.html](http://www.apple.com/downloads/macosx/audio/fielderitunesplugin.html)

Mac OS X



Vortex gives iTunes alternative swirls.

The iTunes Visualizer does an excellent job at interpreting your music, but sometimes you want something a little different. **Vortex** is a little more geometric, a little more stately, and a lot more subtle, using circles that change in color, size, and position. **Fielder** will appeal to your analytical side, displaying a row of lines that represent your audio's tonal range. The length of each line represents the amplitude.

## ICAL CALENDARS

**Movie Calendar**  
[www.apple.com/ical/library](http://www.apple.com/ical/library)

Mac OS X

**American Politics and Government Calendar**  
[www.icalworld.com/gov.html](http://www.icalworld.com/gov.html)

Mac OS X

It's hard to keep track of everything in this crazy world; shared iCal calendars can lend a hand. One of our favorites is the **Movies** calendar, which advises you of upcoming movie release dates. You might also want to raise your civic awareness by subscribing to the **American Politics and Government** calendar, which will help you keep your finger on the pulse of congressional happenings, as well as remind you when it's time to vote. You do vote, don't you?

# Sound Bytes

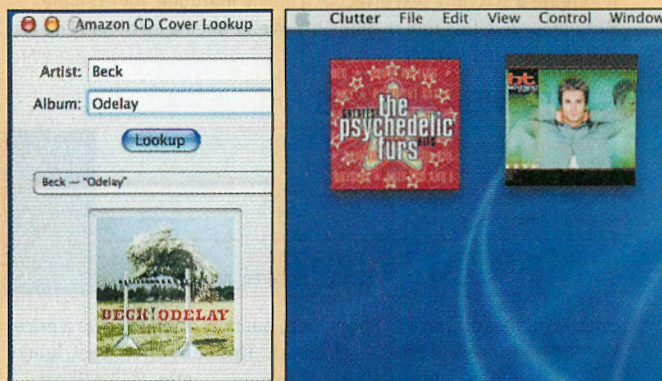
## MP3 CUSTOMIZATION TOOL

**Clutter**  
[www.sprote.com/clutter](http://www.sprote.com/clutter)

Mac OS X

TOP PICK

The extraordinarily cool **Clutter** looks up any CD from Amazon, finds the cover image, and makes an icon from that image that you can stick on your desktop. When you double-click these icons, they play the CD using iTunes (provided that album's in your iTunes library or the CD is in the drive).



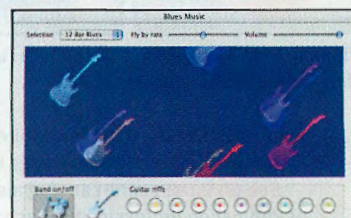
Look up any album in Clutter (left) to clutter up your desktop.

## MUSIC CREATION TOOL

**Blues Music**  
<http://homepage.mac.com/davidahmed/bluesMusic.html>

Mac OS X

There's no need for talent when you have **Blues Music**. Just choose one of three backgrounds (12 Bar Blues, Shuffle, or Rock the Blues), and you'll hear the bass and drums. Then it's up to you to press the guitar-riff buttons to produce a flawless—albeit cliché-ridden—solo to soar above the other instruments.



Blues Music helps you tell it like it is, blues-style.

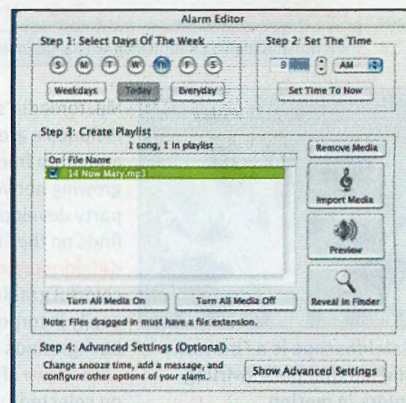
## WAKER-UPPER

**mp3 alarm clock**  
[www.sugarcubesoftware.com](http://www.sugarcubesoftware.com)

Mac OS X

Why wake up to crappy talk radio when you've got a Mac full of MP3s? Use **mp3 alarm clock** to set as many alarms as you want, using as many MP3s as you want. You can schedule different alarms for each day and there's even a snooze option for those of you who sleep next to your Mac.

**Waking up is hard to do, even when it's to your favorite song.**





## SOUND-FILE CONVERTER

### SoundConverter

[www.dekorte.com/downloads.html](http://www.dekorte.com/downloads.html)

Mac OS X

This simple app converts sound files to and from a good selection of formats, including WAV, AIFF, and SND. **SoundConverter** sports a single window with a single menu that allows you to choose the file type you want to convert to. Simple. Effective.

## LIVE365 STREAMS

### Hawaiian Rainbow

[www.hawaiianrainbow.com](http://www.hawaiianrainbow.com)

Mac OS 9 and OS X

### Dubstream

[www.dublab.com/help.asp?bhcp=1](http://www.dublab.com/help.asp?bhcp=1)

Mac OS 9 and OS X

### Attention Span Radio

[www.attentionspanradio.net](http://www.attentionspanradio.net)

Mac OS 9 and OS X

Live365 is an Internet radio hub that expands your listening universe way beyond iTunes radio stations. Simply sign up for a Live365 account ([www.live365.com](http://www.live365.com)), and you can play any of its stations from within iTunes. Here are a few stations that got our toes tapping.

**Hawaiian Rainbow** brings you the lovely, lilting sound of the islands, ranging from stirring instrumentals to downright kitschy ballads. Too mellow? Try the glitzy, upbeat, ever-peppy sounds of dub. With **Dubstream**, you can create a club ambiance around your Mac instantly.

**Attention Span Radio** is your source for rollicking instrumental fusion. You can hear plenty of synth, crashing cymbals, elaborate melodies, bass solos, and wanton experimentation. You can even catch the occasional live recording mixed in with the studio sounds.

# Video F/X

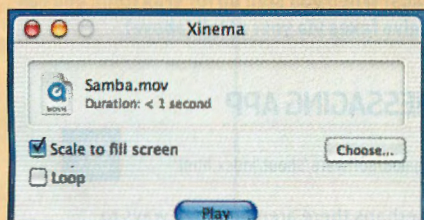
## QUICKTIME UTILITY

### Xinema

<http://lighthouse.sytes.net>

Mac OS X

You don't need QuickTime Pro to play movies at full screen—not when you have **Xinema**. While movies are playing, you can use a small, floating transport control to pause, play, or rewind. You can also opt to hide this transport and use keyboard commands instead. With the keyboard, you can do even more: Jump to specific frames, move forward or backward frame by frame, or adjust the volume.



Using this simple app, you can get your QuickTime movies playing at full screen.

## DISK SPACE CALCULATOR

### VideoCalc

[www.ifthensoft.com](http://www.ifthensoft.com)

Mac OS X, donationware

If you know how many seconds of digital video you can store in a gigabyte of disk space, you're smarter than we are. **VideoCalc** takes care of the hard math—just enter the particulars about the size of your hard drive, and VideoCalc will figure out how much footage you can bring in.

## FINAL CUT PLUG-IN

### Silk and Fog

[www.chv-plugins.com](http://www.chv-plugins.com)

Mac OS 9 and OS X

**Silk and Fog** are subtle effects that essentially cast a silky, blurry shroud over your selected clip. They offer no parameters—you get what you get—but they might fit the bill for that special shot.



Silk and Fog create a dreamy haze over your clips.

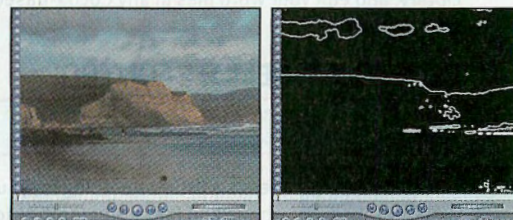
## FINAL CUT/AFTER EFFECTS FILTER

### Cartooner

[www.borisfx.com/download/cartooner\\_landing.php](http://www.borisfx.com/download/cartooner_landing.php)

Mac OS 9 and OS X

**Cartooner** is a wild filter that traces the basic contours of your scene using a thick bright line. The result is a scene that looks hand-animated.



Cartooner provides an interesting hand-drawn effect.

# Office Gadgets

## PERSONAL INFORMATION MANAGER

### Palm Desktop

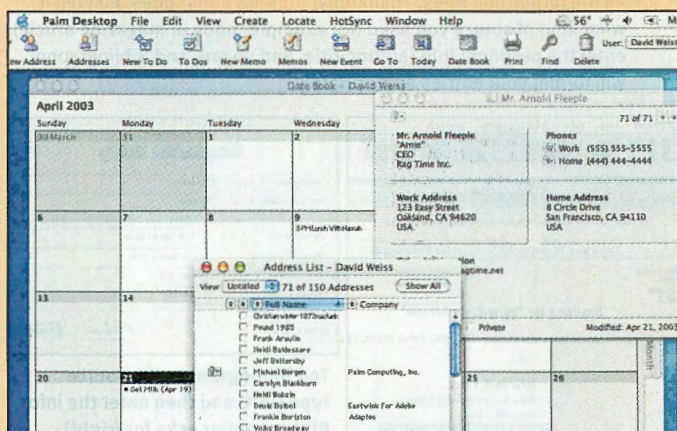
[www.palm.com](http://www.palm.com)

Mac OS 9 and OS X

TOP PICK

No, you don't need a Palm handheld to use **Palm Desktop**, the venerable PIM that Palm ported eons ago from Claris Organizer. Although Palm Desktop is free, it's no wimpy little utility. It's a calendar, a to-do manager, and a contact database rolled into one.

Palm Desktop lets you sort using your own categories, so you can choose to view, say, only your co-workers or your weekend buddies. You can also quickly look up contacts from the Dock, and like any good life-organizer, you can set alarms for those pesky events you wish you could forget about (call dentist, pay taxes, attend mother-in-law's Tupperware party).



Palm Desktop is a PIM that means business.



## Office Gadgets continued...

## DOCUMENT-READING UTILITY

**Palm Reader**

www.palmdigitalmedia.com

Mac OS 9  
and OS X

You also don't need a Palm handheld to take advantage of **Palm Reader**, which lets you view eBooks on your Mac (sorry—it doesn't tell fortunes). Pick a favorite font and text size, add bookmarks, and take notes. The next time you take an interstate bus ride, download a book or two to your laptop first.

## FILE SERVICE

**AntiWordService**

www.devon-technologies.com/freeware.html

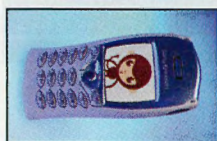
Mac  
OS X

Are you mad at Microsoft Word? So mad that you're just not going to take it anymore? If you don't feel like shouting out your window, here's another way to protest: Install **AntiWordService** in your Library, and edit your Word files in any Cocoa-based text editor, such as TextEdit.

## BLUETOOTH REMOTE CONTROL

**Romeo**

www.irowan.com/arboreal

Mac  
OS X

Control your Mac with your Bluetooth phone.

Here's a little something for your fancy Bluetooth phone and fancy Bluetooth Mac. **Romeo** lets you control your Mac with your phone. You can move the cursor and broadcast clicks (among other maneuvers)—perfect for advancing Keynote slides with your phone while leaving one hand free for wild gesticulations.

## DATABASE APP

**Little Office**

www.timbri-online.com/LittleOffice

Mac OS X,  
donationware

If you have a small business, and you want a simple way to keep tabs on your inventory, **Little Office** is a humble alternative to throwing time and money into more-involved apps such as FileMaker Pro or MySQL—just use its templates to keep track of orders, customers, sales, and other such lucrative activities.

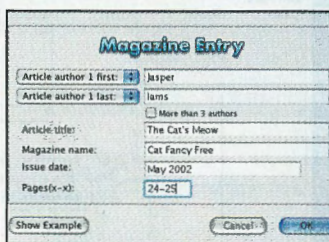
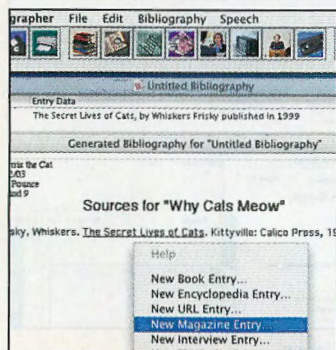
## BIBLIOGRAPHY FORMATTER

**Bibliographer**

www.stanford.edu/~tristanh

Mac OS 9  
and OS X

You're trying to pull together a bibliography, and you don't remember all the formatting rules. Thankfully, **Bibliographer** does. Just tell it what kind of source you used (for example, book or magazine article), enter the pertinent info (author, title, and so on), and Bibliographer will format your entries appropriately.



Tell Bibliographer the source type (left) and then enter the info Bibliographer asks for (right).

## CONTACT MANAGER

**Sbook**

www.sbook5.com

Mac  
OS X

**Sbook** is a simple, small contact application. Its main strength is its search function, which can quickly find any and all information in any field of any record in its database. For example, if you don't remember the name of that guy from Apple you met, just type in *Apple*, and *Steve Jobs* will pop to the top.

## Communication

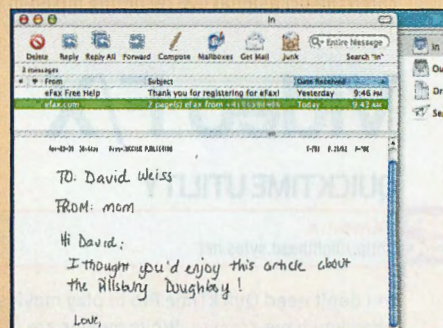
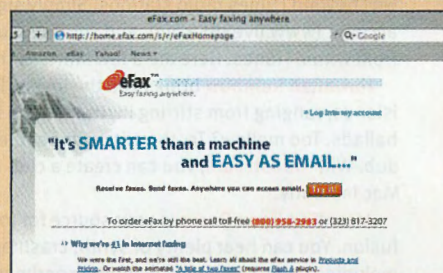
## WEB-BASED FAX SERVICE

**eFax**

www.efax.com

Mac OS 9  
and OS XTOP  
PICK

You don't have to run down to Kinko's every time someone sends you a fax—unless, of course, you like hanging out at Kinko's. All you need to do is sign up for a free account with **eFax**, give out the fax number bestowed upon you, and faxes will arrive as TIFF files in your email in-box. You can't send faxes with the free version though—for that, you need eFax Plus, which costs \$9.95 a month. Signing up for eFax Plus also yields you a local fax number; the free version gives you a fax number with a random area code.



eGads! When you sign up for eFax (top), you can receive faxes via your eMail (above).

## LOCAL NETWORK MESSAGING APP

**Shout**

http://homepage.mac.com/nebagakid/software/shout/index.html

Mac  
OS X

Phone, fax, email, paging...perhaps there aren't enough ways to bug people these days. Well, thanks to **Shout**, a Rendezvous-based messenger, there's one more. Run the server app on your Mac, and send messages to anyone on your local network. To see the Shout server's message, just run the client and subscribe to the service.

## WEB MAIL

**MyMacMail**

www.mymacmail.com

Mac OS 9  
and OS X**TheCrazyOnes**

www.thecrazyones.com

Mac OS 9  
and OS X

Yes, it's a crying shame that Mac.com email addresses are no longer free. Luckily, you can still get the Mac back into your email address. **MyMacMail** will assign you a *yourname@mymacmail.com* address,



along with 10MB of mail storage space. Yes, you're gonna get a few ads here and there as you check your email, but the service keeps it to a minimum. For those with a bit more Mac fervor—"the misfits, the rebels, the troublemakers"—you can get a *thecrazyones.com* email address. **TheCrazyOnes** service will also give you 6MB of storage.

## SCREEN-SPYING UTILITY

**Spy**  
www.silvernetwork.net

Mac OS 9 and OS X, donationware

If you want to show someone what's on your screen, you could email them a screenshot—better yet, you could use **Spy**. All you do is launch the Spy Server, press Start, and you'll be assigned an IP Address. Send someone that address and they can see your screen via a Web browser.

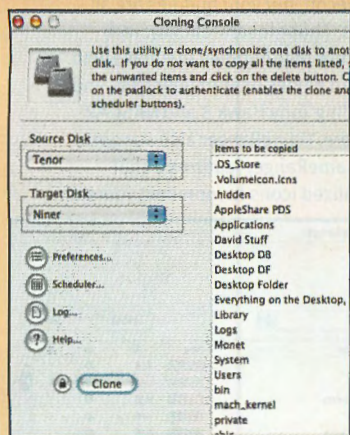
# Utilities

## SYSTEM COPYING UTILITY

**TOP PICK**

**Carbon Copy Cloner**  
www.bombich.com/software/cccl.html

Mac OS X, donationware



**Carbon Copy Cloner creates a bootable copy of your system in a jiffy.**

Before Mac OS X came around, moving to another Mac meant just transferring a few crucial system folders and your data. Nowadays it's a royal pain: Many crucial files are invisible, making it impossible to find everything you need to move.

Enter **Carbon Copy Cloner**. This sweet little app creates a bootable copy of your system (you can also use it to make regular ol' non-bootable backups). It has a clean, simple interface—all you do is choose the source and target disks. You can also tell Carbon Copy Cloner what to ignore, such as files you've already backed up.

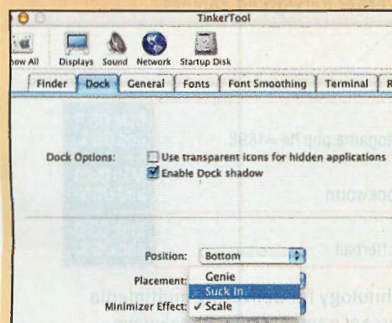
## SYSTEM TWEAKER

**TOP PICK**

**TinkerTool**  
www.bresink.de/osx/TinkerTool2.html

Mac OS X

For those of you who don't want to get your hands dirty hacking Mac OS X, **TinkerTool** is a great catch-all system-preference app for making all sorts of miscellaneous OS X system adjustments.



**TinkerTool is a great catch-all utility.**

With TinkerTool, you can opt not to show the rectangle effect (a series of animated black rectangles that appear when you open a file), add Quit to the Finder menu, and turn on a shadow around the Dock, among other things. You can also change the system font, move the Dock to the top of the screen, and choose the Suck In window-minimizing effect (a variation of the Genie effect).

## QUARTZ EXTREME UTILITIES

**Quartz Extreme Check**  
www.entropy.ch/software/macosx/#quartzextremecheck

Mac OS X

**PCI Extreme**  
http://pages.cthome.net/zacks

Mac OS X

If you've upgraded to Jaguar, its Quartz Extreme graphics acceleration feature may or may not be running. To find out, you could check Apple's site to see if your graphics card supports Quartz Extreme, but the easiest way is to run **Quartz Extreme Check**, which will just flat-out tell you if Quartz Extreme has kicked in or not.

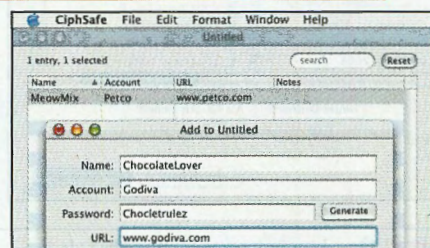
According to Apple, Quartz Extreme only runs when you have an AGP graphics card. But why listen to Apple? (We don't, as evidenced by our PowerBook autopsy, p39.) **PCI Extreme** will force a Mac with a PCI Radeon card to use Quartz Extreme.

## PASSWORD-MANAGEMENT APP

**CiphSafe**  
www.withay.com/macosx/ciphSAFE.html

Mac OS X

Another day, another password and user name. **CiphSafe** is a vault for all your secret account information and other stuff you don't want to write down—and it's much easier to use than Apple's Keychain. It can also generate passwords for you, using good cypherpunk sense.



**CiphSafe restores password sanity—although you still have to remember the password to launch CiphSafe.**

## ENCRYPTION SOFTWARE

**PGP Freeware**  
www.pgp.com/products/freeware.html

Mac OS X

You've heard it before, but we'll say it again: Dedicated hackers can intercept and read any Web form, email, or other online missive. And though no encryption scheme is perfect, you can achieve close-to-unbreakable email privacy via the free software provided by **PGP** (Pretty Good Privacy). Just encrypt a message and create an unlocking code for your recipient; just don't distribute this code along with your top secret email. But you knew that. We hope.

## FILE LAUNCHERS

**Locator**  
www.sebastian-krauss.de/software

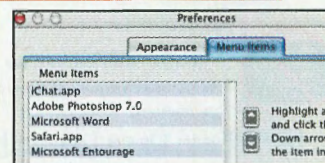
Mac OS X

**Rocket Launcher**  
http://homepage.mac.com/type\_r503/ke19000.html

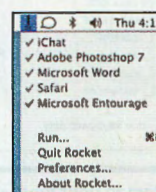
Mac OS X

Finding files using Jaguar's built-in search is relatively quick, but the Unix locate command is even quicker. **Locator** puts an Aqua face on this command, which makes it easy to use as well as fast. It needs a little time to build a database every so often, though—so cut it some slack.

If you miss the ol' application menu from pre-OS X days, **Rocket Launcher** can help. It puts an app-launching menu in your menu bar, even letting you pick the apps you want to appear there. G'bye, Dock!



**Select the apps you want to access from your menu bar (above), and Rocket Launcher will put them there (right).**





Utilities continued...

## WEB-BASED STORAGE

**Yahoo Briefcase**  
http://briefcase.yahoo.com

Mac OS 9  
and OS X

Quite a few sites offer Internet storage, but our favorite is **Yahoo Briefcase**. You can store up to 30MB in your Briefcase, and it's both fast and reliable.

## FINDER UTILITY

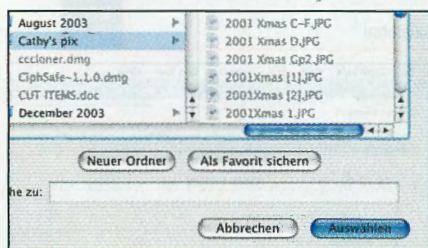
**Tree Size**  
www.monkeybreadsoftware.de/Freeware

Mac OS 9 and OS X,  
donationware

It would be nice to know the size of all the folders nestled inside a particular folder, rather than having to do a Command-I on every single one. Well, that's exactly what **Tree Size** does. Be warned, though, the program is in German. If you don't sprechen Sie Deutsches, all you need to know is that clicking the active button will

run the app and that the button beside the active one means cancel.

Even though you have to navigate folders in German (left), the results **Tree Size** gives you are crystal-clear (below).



Cathy's pix				
Name	Größe	Folders	Files	
▼ Cathy's pix	13693.5 KB	1	118	
▶ Palm Photos	4224.7 KB	2	94	
Total Data Ressource				

## APP-OPENING APPLESCRIPT

**Wipe Creator**  
www.scotlandsoftware.com/products/applescript/index.html

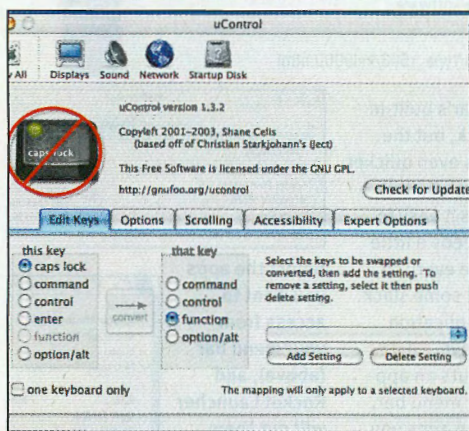
Mac OS X

It's frustrating when the wrong application opens a file. **Wipe Creator** ensures that files open in the appropriate default Mac OS X application. For example, drop a JPEG created in GraphicConverter onto this AppleScript and your image will open in Preview.

## KEYBOARD LAYOUT CONFIGURATOR

**uControl**  
http://gnufoo.org/ucontrol/ucontrol.html

Mac OS X



Some folks just aren't satisfied with anything—even their keyboard layouts. If you're one of 'em, take **uControl** for a spin. This system preference app can turn Control keys into Command keys, give your laptop's trackpad scroll-wheel capabilities, and accomplish other slick maneuvers of this kind.

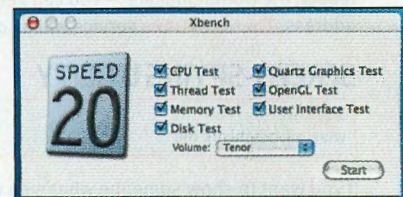
Remap your keys with uControl.

## BENCHMARKING TOOL

**Xbench**  
http://xbench.com

Mac OS X,  
donationware

**Xbench** will measure CPU, RAM, hard disk, and other aspects of your Mac's performance. If you're curious how your Mac stacks up against the other zealous overclockers out there, you can compare your results to postings on the Xbench Web site.



**Xbench clocks your Mac so you can back up your speed claims.**

# Games

## MULTIPLAYER ONLINE GAMING SERVICE

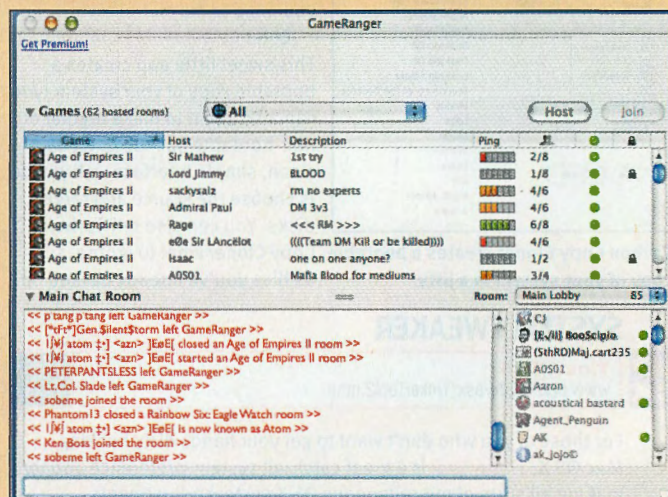
**GameRanger**  
www.gameranger.com

Mac OS 9  
and OS X

TOP  
PICK

You've got a hankering to play Ghost Recon, but your buddies are all out on dates or schmoozing at job fairs. Those losers! Luckily, with **GameRanger** you can find a bunch of new Mac buddies to rumble with.

GameRanger lets you join networked games or start your own, and it supports many newer games, including Tony Hawk 3 and NASCAR Racing 2002. For the less-than-hardcore, GameRanger also supports games like Scrabble and Monopoly. GameRanger features a chat window and the ability to use personalized icons to represent yourself.



**GameRanger hooks you up with other networked gamers.**

## SHOCKWAVE GAMES

**Snow Craft**  
www.arcadepod.com/shockwave/gotogame.php?id=1898

Mac OS 9  
and OS X

**Bookworm**  
www.shockwave.com/sw/content/bookworm

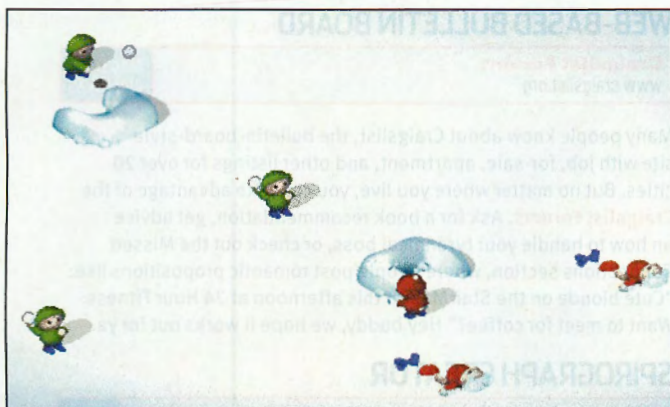
Mac OS 9  
and OS X

**Gutterball 3D**  
www.shockwave.com/sw/content/gutterball

Mac OS 9  
and OS X

Shockwave is Macromedia's technology for delivering multimedia content over the Web—aka supercool games! Many Shockwave games are available for download (usually for a fee), but you can





We killed Kenny! Snowballs become lethal weapons in *Snow Craft*.

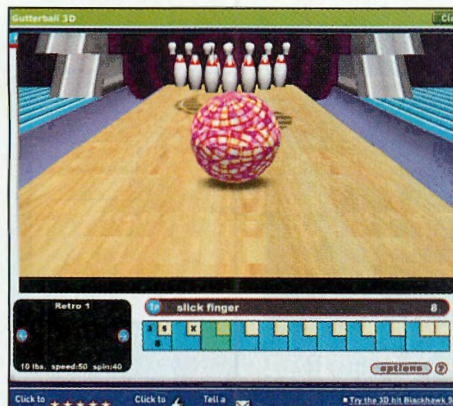
play most of the same games online for free. Just be sure you've got the Shockwave plug-in installed ([www.macromedia.com/software/shockwaveplayer](http://www.macromedia.com/software/shockwaveplayer)).

In *Snow Craft*, two teams of kids who look like they stepped right out of *South Park* battle it out with snowballs. Your goal: to

knock the other team senseless before they do the same to you. It's a bit slow, even with broadband, but fun.

**Bookworm** is an entertaining diversion for word nerds. You try to spell words by connecting tiles—the longer the word, the higher the score.

**Gutterball** is (surprise, surprise) a bowling game, and it effectively captures the aspect of the



Bowl without the smelly used shoes in *Gutterball*.

game where you fan the air in the hopes of directing the path of your ball. Just move your mouse to slowly affect the ball's trajectory. It's also worth checking out *Gutterball* just for the good old-school funk background music.

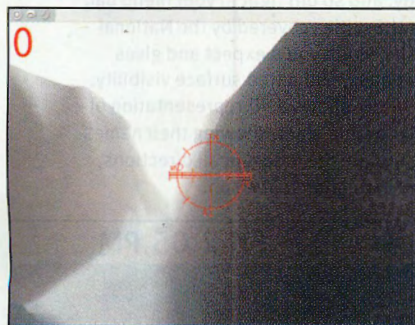
## FREWARE GAMES

**3DBlur**  
<http://home.fuse.net/obvious>

Mac  
OS X

**Asteroid Storm**  
[www.zarkonnen.com](http://www.zarkonnen.com)

Mac OS 9  
and OS X



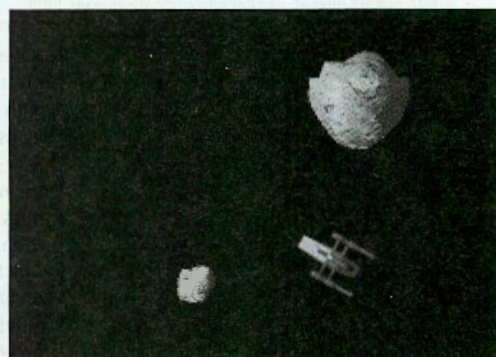
Fly through a canyon in *3DBlur*—and try not to hit anything, would ya?

**3DBlur** is a flight sim—but in this case, *sim* is short for simple. You fly through a naturalistic maze of mountains and try not to crash—but there's nothing realistic about your aircraft. It has one gauge, which shows your approximate position, and a single means of control: either your mouse or the arrow keys. Still, *3DBlur* is addictive—the farther you

get through the terrain, the higher your score.

In **Asteroid Storm**, you're on a space ship surrounded by asteroids.

Sound familiar? *Asteroid Storm* is an homage to *Asteroids*, which addicted a generation of arcade-goers, and it doesn't disappoint. The graphics and sounds are impressive, and the explosions are rendered in convincing detail.



Asteroids, anyone? Blast through rocks in this classic space game.

# Web Paraphernalia

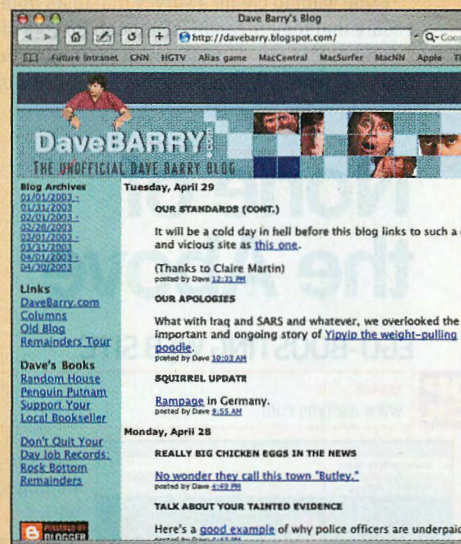
## ONLINE BLOG CREATOR

**Blogger**  
[www.blogger.com](http://www.blogger.com)

Mac OS 9  
and OS X

**TOP PICK**

If you have something to say to the world, just sign up with **Blogger**, choose from a variety of templates and formats, and post messages via its Web site. What you enter will appear on your own site. Whenever you get the urge to pontificate, just head over to the Blogger site and submit an update. The only catch: Your blog (short for Web log) will bear the Blogger logo—a small price to pay considering how easy Blogger is to use.



**Blogger must be good—Dave Barry uses it.**

## WEB-HOSTING SERVICE

**Mac Rules**  
[www.macrules.com](http://www.macrules.com)

Mac OS 9  
and OS X

If you're looking for a place to host your Web site, check out **Mac Rules**, where you can pick up 10MB of server space. To qualify for free hosting, however, you have to offer Mac-oriented content. If you ever wanted to post your own product reviews, rave about the latest gadgets, or rag on Apple's management, this could be the digital soapbox for you.



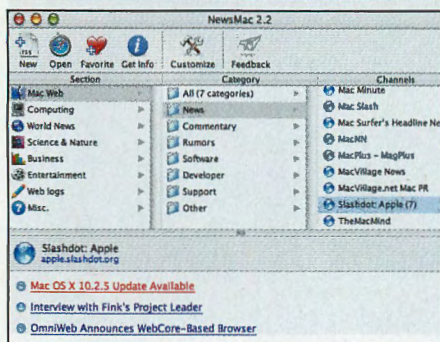
Web Paraphernalia continued...

## BROWSING UTILITY

### NewsMac

<http://users.aber.ac.uk/rlp9/newsmac/downloads.html>

Mac OS X,  
donationware



News Web sites can be pretty distracting, what with all the blinking icons and banner ads.

**NewsMac** retrieves the news for you and puts it into a clean, friendly interface. And because it only displays headlines and text, NewsMac is much faster than any browser, and works well even over dial-up.

NewsMac delivers just the facts.

## WEB-DEVELOPMENT TOOLS

### MySQL

[www.mysql.com/downloads/mysql-4.0.html](http://www.mysql.com/downloads/mysql-4.0.html)

Mac  
OS X

### Dragon Web Surveys trial

<http://wmotion.com/dragon.html>

Mac OS 9  
and OS X

Say you run a club for Mac fanatics. You don't want to list all the members of your club on a static Web page. Instead, you want your members to be able to search for other members based on a few criteria. What you need is **MySQL**, an ongoing, open-source database that can help your Web site handle dynamic content.

If you want to create a survey that tests potential members to ensure that they're fanatical enough for your club, check out the **Dragon Web Surveys** trial, which (in conjunction with FileMaker Pro) lets you create a Web survey that can receive up to 50 responses.

# None of the Above

## EGO-BOOSTING WEB SITE

TOP  
PICK

### usoFyne

[www.usofyne.com](http://www.usofyne.com)

Mac OS 9  
and OS X



usoFyne tells you the whole truth and nothing but.

worth the wait. Here's what usoFyne had to say to someone who was recently laid off: "What is up with that? Getting laid off—you, of all people! You who are so hot and awesome and an important part of the company....Despite your current problems, your amazing awesomeness is full-time, forever..." We've never loved ourselves as much as we do now.

If you're feeling down, go fishing for a compliment with **usoFyne**. Just fill out a Web form with some basic information about yourself, and a real person emails you back a usoFyne—a thoughtful (and ever-so-slightly risqué) barrage of compliments.

Be patient! It took about two weeks for us to get a response, but it was well

## WEB-BASED BULLETIN BOARD

### Craigslist Forums

[www.craigslist.org](http://www.craigslist.org)

Mac OS 9  
and OS X

Many people know about Craigslist, the bulletin-board-style site with job, for-sale, apartment, and other listings for over 20 cities. But no matter where you live, you can take advantage of the **Craigslist Forums**. Ask for a book recommendation, get advice on how to handle your tyrannical boss, or check out the Missed Connections section, where people post romantic propositions like: "Cute blonde on the StairMaster this afternoon at 24 Hour Fitness: Want to meet for coffee?" Hey buddy, we hope it works out for ya.

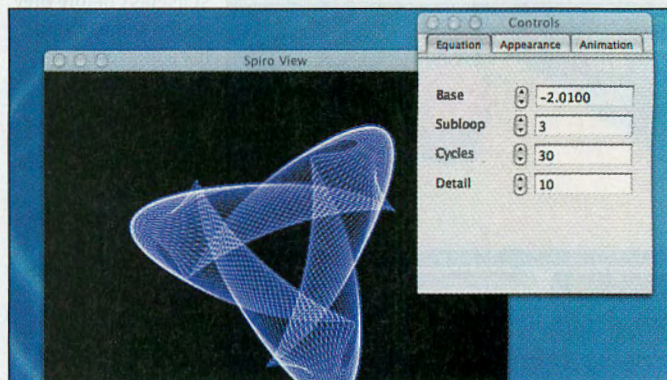
## SPIROGRAPH CREATOR

### SpirographX

<http://homepage.mac.com/solidmag/spiro>

Mac  
OS X

Remember that spirograph-drawing gear set you had as a kid? Here's a digital version—only now you don't have to worry about keeping your pen in the hole. Just play with different settings like color and equation, and **SpirographX** will dutifully draw a spirograph image (or animation, if you wish). You can even turn your animation into a screensaver.



SpirographX nurtures your inner kindergartner.

## EARTH AND SPACE

### WeatherPop

[www.glu.com/products/weatherpop/index.html](http://www.glu.com/products/weatherpop/index.html)

Mac OS X

### MoonDock

<http://homepage.mac.com/garycmartin>

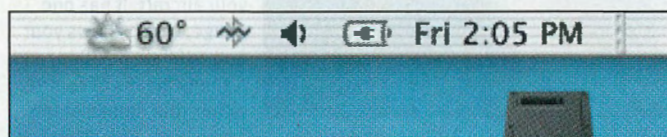
Mac OS X,  
donationware

### Our Neighbors

<http://homepages.tig.com.au/~cthulhu/sbc/index.html>

Mac OS X

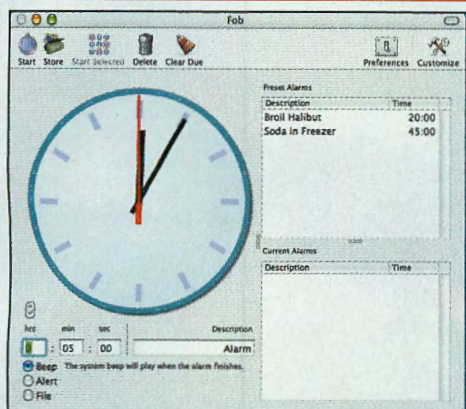
**WeatherPop** shows the current temperature and a weather icon (indicating sunny, partly cloudy, and so on) right in your menu bar. The free version only includes U.S. cities covered by the National Weather Service. **MoonDock** sits where you'd expect and gives you a run-down of the moon's phase, estimated surface visibility, and other lunar info. **Our Neighbors** shows a 3D representation of our sun and its 70 nearest neighboring stars, showing their names and other information. You can rotate the model in all directions, changing your view of the stars in relation to the sun.



Keep tabs on the outside world with WeatherPop.



## KITCHEN TIMERS

**Fob**
<http://homepage.mac.com/tfinley/LeakyPuppy/fob.html>
Mac  
OS X**Cuppa**
[www.wunderbear.com/cuppa](http://www.wunderbear.com/cuppa)
Mac  
OS X

Fob will tell you when to check on your culinary creations.

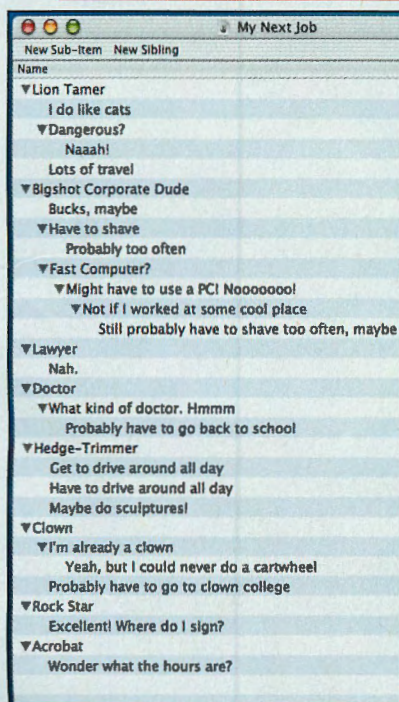
Have you ever been so involved in getting that drop shadow just right in Photoshop that you accidentally burn your dinner roast beyond recognition? You need **Fob**. Fob is a kitchen timer for your Mac that counts down a set amount of time, then chimes when it's time to deal with the meat. **Cuppa** is more specific: It knows how long to steep

various types of tea. A teacup icon bounces in your Dock, complete with a spoon-clank sound, when your tea is ready to sip.

## BRAINSTORMING TOOLS

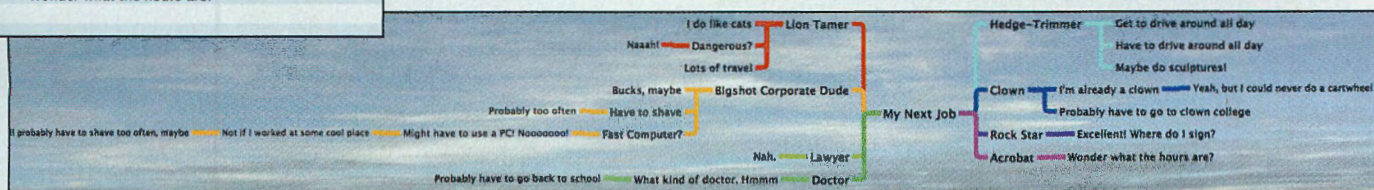
**Idea Knot**
[www.StayAtPlay.com/ideaknot](http://www.StayAtPlay.com/ideaknot)

Mac OS X

**MyMind**
[www.sebastian-krauss.de/software](http://www.sebastian-krauss.de/software)
Mac OS X,  
donationware

You know you're a genius, but to convince others of that, your ideas need to be well organized. **Idea Knot** is a simple app that helps you sort your thoughts into categories. **MyMind** is another brilliance-structuring tool that lets you outline your ideas, projects, and so on, and then export them into a graphical flowchart that you can use in apps such as Keynote.

Type out your thoughts in MyMind (left), and it will produce a graphical representation of that mumbo jumbo (below).

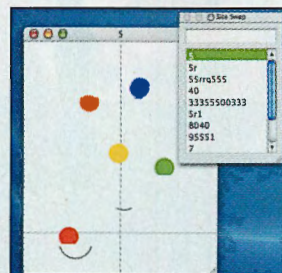


## CIRCUS-CAREER STARTER

**Juggle**
<http://home.earthlink.net/~ocb1/mac.html>
Mac  
OS X

So you want to learn how to juggle. **Juggle** shows very simple, clear animations of complex juggling patterns. Even if you can't immediately replicate them using flaming torches or chain saws, at least you can get an idea of what you need to work on.

Juggle preps you for your next job interview.



## WEB-BASED ALARM

**Birthday Alarm**
[www.birthdayalarm.com](http://www.birthdayalarm.com)
Mac OS 9  
and OS X

If you're always forgetting your mom's birthday, the **Birthday Alarm** Web site can help get you out of hot water. Sign up, and it gives you a link that you can email to those special somebodies so they can fill in their vital info. Once their information is in the system, you'll get an auto-reminder a week before the big day.

## DESKTOP CLOCK

**Fuzzy Clock**
[www.objectpark.org/FuzzyClock.html](http://www.objectpark.org/FuzzyClock.html)
Mac  
OS X

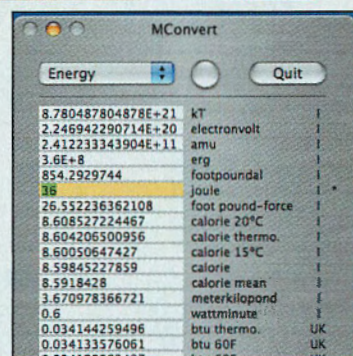
The problem with most digital clocks is that they're so...accurate. A time of 11:56 doesn't carry nearly as much meaning as 'round midnight'. **Fuzzy Clock** addresses this problem by using terms such as *nearly*, *almost*, and so on, to express the time. It can also tell you the date, although that info is given precisely—you'll see June 15 rather than "mid-June."

## CONVERSION UTILITY

**MConvert**
[www.icp.com.na](http://www.icp.com.na)
Mac  
OS X

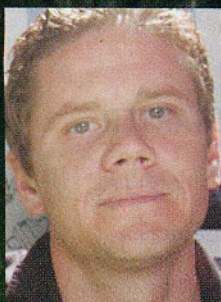
How many tablespoons in a liter? Who knows? Who cares? Luckily, **MConvert** does. In fact, it also knows picas, leagues, calibers, bushels, pecks, and then some. Oh, the answer's 67.6.

MConvert knows a hell of a lot about measurements.



David Weiss is a technology writer based in Oakland, California, and has worked at a number of Mac publications. He's downloaded so many free things from the Web that he dreams in RGB.





**EXCLUSIVE INTERVIEW**

## THE ARTISTS BEHIND THE BIG SCREEN'S GREEN SMASHING MACHINE



After Effects 5.5 tryout,  
Painter 8 trial, Universe  
5 demo, bonus articles,  
plus a video interview  
with Jules Mann and  
Wilson Tang

**by Kris Fong**



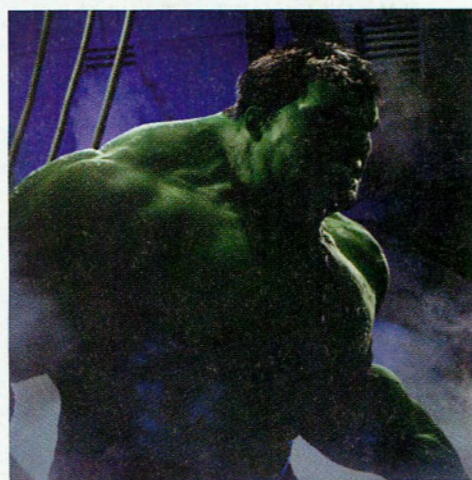
# The Hulk

**We reveal the secret design weapon that propelled the Hulk from sketch to silver screen.**

**A**s a famous frog once said, it's not easy being green. It's also not easy being the guys who had to choose the perfect shade of green to cover literally one of the biggest Marvel Comics superheroes to come to the big screen. But that was exactly the challenge facing art directors Jules Mann and Wilson Tang at Lucas Digital's Industrial Light + Magic (ILM).

Of course, the hero we're talking about is the Hulk, and the movie is this summer's much-anticipated *The Hulk*, directed by Ang Lee and starring Eric Bana and Jennifer Connelly. Like any Hollywood superhero movie, *The Hulk* is full of flashy effects and computer-generated graphics. And like many Hollywood movies these days, Macs played an integral part in the production—this time in coming up with the Hulk's design as well as the movie's conceptual art and previsualization sequences (computer-generating the final Hulk was a job for SGI machines and penguin boxes, aka Linux).

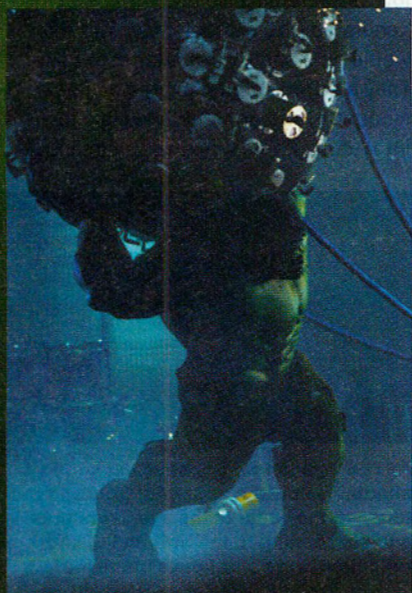
This spring, *MacAddict* visited the award-winning visual effects powerhouse ILM in San Rafael, California. There we met up with Mann and Tang to find out how they used Macs to design the Hulk and establish the movie's scene sequences. A quick drive north over the Golden Gate Bridge and we were on our way to digital nirvana...



## **Hulk** THE BEGINNING

The Incredible Hulk started life as a Marvel Comic character created by Stan Lee and Jack Kirby in 1962.

HULK IMAGES COURTESY OF ILM/UNIVERSAL





**NAME GAME** The Hulk's alter ego is physicist Dr. Robert Bruce Banner. He took the name David Banner when *The Incredible Hulk* came to TV. In the movie *The Hulk*, he's once again known as Bruce Banner.

## The Art-Directing Duo

Strip-mall hell! Not exactly where we envisioned the site of a premier visual effects conglomerate—but that's all we could see while waiting for our visitors'

we don't use it." Tang adds, "We're not leaving Photoshop 5.5." When asked why they won't make the switch, Tang sums it up best: "You're driving a classic car like that and somebody says, 'Here, take this other steering wheel.' You don't want it. You know how to drive that car."

Because *The Hulk* was such a large project, ILM put two art directors on the movie. Tang dealt with the Hulk as a creature and actor, helping to define his look, gestures, characteristics, and movement. Mann was responsible for integrating the Hulk within his environment and defining his interaction with the elements around him.

## Concept to Creature

The first challenge was to design the Hulk's physical being so that ILM's computer graphics team could bring the character to 3D life. This process involved deciding how big and brawny the Hulk should be, what his features should look like, and, of course, choosing the perfect shade of green.

Work began with a sculpted model of the Hulk (called a *maquette*) and director Ang Lee's casting of Eric Bana, who plays the Hulk's human alter ego, Dr. Bruce Banner. Mann and Tang also received pictures of Bana performing different facial expressions (mostly anger—the Hulk doesn't exactly grin a lot) as a reference so that the computer-generated (CG) character's expressions would bear some resemblance to Bana. They also took digital photos of the maquette, and brought those images into Adobe Photoshop to experiment



ILM art directors Wilson Tang (left) and Jules Mann (right).

passes. But once we were granted access and entered ILM's magical kingdom, we gawked as we strolled past *Jurassic Park* trees, a carbonized Han Solo (not the classic version), a *Harry Potter 2* Quidditch matte painting (created on a Mac), Darth Vader, the Energizer Bunny, and even a few fruity iMacs on our way to meet *The Hulk*'s two art directors.

Unfortunately, being art directors at a prestigious company doesn't necessarily net you a lot of space. Mann and Tang work together in cramped quarters, surrounded by a menagerie of ILM-created models and toys from *Star Wars*, *Jurassic Park*, *Star Trek*, *Men in Black*, and other blockbuster films. A couple of G4s sit at their feet.

Though ILM upgraded all of its Macs to OS X in March this year, both Mann and Tang are still holding out in OS 9. According to Mann, "We have X, but we just rebel—

## TOOLS OF THE TRADE

The following hardware and software tools are indispensable to ILM art directors Jules Mann and Wilson Tang.

- Power Mac G4, Mac OS 9 and OS X, 512MB of RAM, 40GB disk space ([www.apple.com](http://www.apple.com))
- SGI monitors ([www.sgi.com](http://www.sgi.com))
- Wacom Intuos 17-inch tablet ([www.wacom.com](http://www.wacom.com))
- Adobe After Effects, Illustrator, and Photoshop ([www.adobe.com](http://www.adobe.com))
- Corel Painter ([www.corel.com](http://www.corel.com))
- Electric Image (now part of Universe, [www.electricimage.com](http://www.electricimage.com))
- ILM OpenEXR ([www.openexr.net](http://www.openexr.net))
- NewTek LightWave 3D ([www.newtek.com](http://www.newtek.com))
- Nikon Coolpix 900 ([www.nikonusa.com](http://www.nikonusa.com))



**BEFORE** Tang wanted to make the Hulk's eyes more realistic in this 3D render.



**AFTER** Using Photoshop, Tang added a shadow below the upper lid, gray and red tones to the white of the eye, highlights and sharpening to the bottom lid, and reflection and color flecks in the iris.



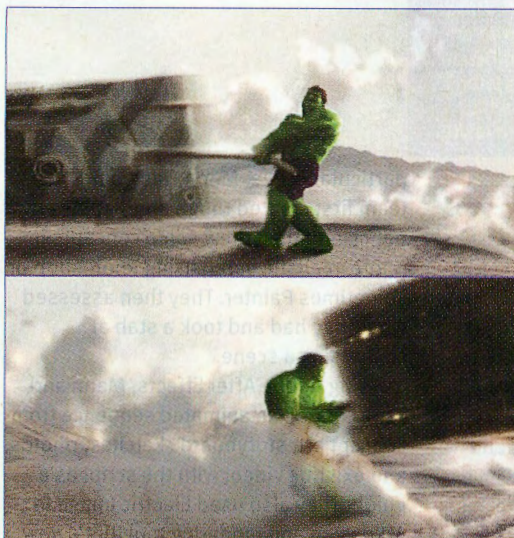
with different facial mutations.

Mann and Tang worked on much of this developmental phase with Ang Lee sitting alongside them. Mann gives props to the Mac for making this process work. "Because we are on a Mac, it's so much faster than a lot of the SGI stuff because we have Photoshop and a scanner and a digital camera. We played with 50 different color palettes, taking elephant skin and using Photoshop [to layer] it on [the Hulk's face], playing with his hair, taking his facial features and actually elongating his jaw and widening it."

To establish the Hulk's full-body characteristics, they videotaped a body builder—as Mann puts it, "a big, buff guy"—to study his movement and apply it to the Hulk's design. But they didn't want to make the Hulk too human. As Mann points out, "He's a creature, and he's 15 feet tall and green and a thousand pounds, so there have to be some cinematic things that plus it out—that make it over the top, a little more comic book-like."

ILM's team of 2D conceptual artists created anatomical sketches of the Hulk on paper. Mann and Tang sent these sketches, along with their images and some comic-book reference material, to the CG modelers, who then sculpted the Hulk into a rough 3D form. From these renders, Tang and team defined the Hulk's more-detailed characteristics—skin textures, facial and body hair, and muscle form, for example—using Photoshop to illustrate ideas and insert corrections onto the renders for the CG team.

Mann and Tang also began working on incorporating the Hulk into the movie. Using Photoshop (and sometimes Corel Painter), they created drawings and photorealistic images, called *concept art*, to illustrate various story points. For example, they showed how dirt should appear on the Hulk's skin, developed landscape environments around the Hulk, and even mapped out the gradual disintegration of the Hulk's tattered trousers (Mann showed us his own shorts, which they scanned in as reference scrap material—no, he wasn't wearing them when he showed them to us). All of this art went to the CG team, who integrated the Hulk animatically (in animated 3D) into movie scenes.



**BEFORE** Tang created these concepts using Photoshop and Electric Image to detail the lighting and environment in a story sequence, and gave them to the CG team for reference.

**AFTER** And here's the scene, created by the CG team, as it appears in a frame of the actual movie.



## Storyboarding on Steroids

To lay the groundwork for what should visually happen in a scene, Mann and Tang used their Macs to create previsualization, or *pre-vis*, sequences—a process that takes storyboarding to the next level by combining assorted media and animating them to flesh out a scene's sequence and visual angles. Pre-vis allows the director to get a sense of what a scene will look like and how it'll flow with existing footage before it's greenlighted for production.

"Traditionally, [pre-vis] is meant [to illustrate] camera position and lens choices and just rough blocking, but more and more what we're trying to do is animate concepts," says Tang. "We're able to bust out rough-looking shots that have the mood, the palette, and the lighting to help guide some of these sequences."

In *The Hulk*, pre-vis generally started with the movie script, some rough sketches, and Ang Lee's notes on a



These shorts inspired the ones that ended up on Hulk's body.

## Hulk

**MEAN AND GREEN** Banner designed the gamma bomb (G-bomb), which detonated and irradiated him. As a result, Banner turns green and becomes the Hulk when he gets excited and enraged.



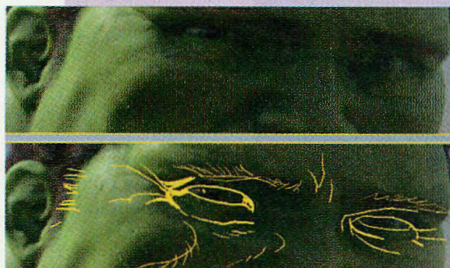
**FAMILY TRAUMA** Bruce Banner's father, Brian, was an alcoholic who murdered Bruce's mother, Rebecca. Years later Bruce accidentally killed his father at his mother's gravesite.

## ANATOMY DAILIES: FIXING FLAWS TO KEEP IT REAL

To make the Hulk look convincing, Mann and Tang inspected renders and created correction diagrams on their Macs to show the CG team what to fix.



**BEFORE** Using Photoshop, Mann and Tang drew on top of the image (usually including written notes in Photoshop) to highlight changes for the CG team. In this scene (see above), Mann and Tang wanted to mess up the Hulk's hair more, add wrinkles and skin folds to his face, and reshape his deltoid and trapezius muscles, collarbone, cheekbones, and facial muscles. An additional sketch (see below) gave the CG team a more detailed outline of how to restructure the Hulk's face and reshape his eyelids. It also showed how wrinkles and skin folds should appear.



**AFTER** The CG team then incorporated the changes and produced another CG render for the art directors to once again inspect for approval. This is the final approved render.



particular scene. Mann, Tang, and team first created rough story guides in pencil and then drew some concepts in photo-realistic detail using Photoshop or sometimes Painter. They then assessed what they had and took a stab at composing a scene.

Using Adobe After Effects, Mann and Tang created an animated sequence from concept art, storyboard sketches, photos, and existing video, with the script as a guide. They also used Electric Image (a 3D design and rendering tool that's now sold as part of Electric Image's Universe app) and NewTek LightWave 3D to add environments and camera angles to the scenes. The duo then sent the sequence to an editor, who dropped it into the movie to see how everything flowed. Says Mann, "With the Mac, it was great because we could jump into Photoshop and then go over to After Effects [and] animate it. We're totally set up with EXR files [OpenEXR, ILM's open-source image file format with a high dynamic range], and we're color-calibrated with the SGI side, so everything we send over is directly usable."

The pre-vis helped speed the workflow and kept the movie's progress moving forward steadily. "[The sequence] is not just a still piece of art—or even just an animated piece of art," Mann explains. "The editor can take and drop [the sequence] in his cut of the movie, and it will fit with the timing and the dialogue and the pacing and everything."

The duo would then present the sequence either to Lee or to Dennis Muren or Ed Hirsch (the two visual effects supervisors) for approval. Half the time, their ideas wouldn't even be close to what Lee was thinking, but

they'd talk, get a better idea of what direction to go in, and forge on. "We're able to take a stab at it and get closer and closer, we hope, to what he was envisioning, and I think we've been fairly successful," says Tang.

What was Ang Lee envisioning? What was it like to conceptualize a big green guy that Lee likens to lichen? And what about abstracting Lee's ambiguous themes of bonsai trees, jellyfish, and galaxies? "There's a whole world going on in Ang's mind," says Mann. "We basically get pieces fed to us as we go along." As a teaser, Mann showed us a trippy pre-vis scene they dubbed "electricity father" that plays on these themes. You'll have to wait for the movie to see it for yourself.

## Checks and Balances

The work didn't end there. The CG team had to send every render to Mann and Tang, who pored through the sequences on their Macs to make sure the Hulk looked and interacted believably with the real world (or as real as a world can be when you have a 15-foot brawny green giant running amok in it). Mann and Tang refer to this morning ritual as *anatomy dailies* (see "Anatomy Dailies—Fixing Flaws to Keep It Real," left).

If something didn't look right, Mann and Tang used Photoshop to draw corrections on top of the CG render and sent it back to the technical directors and CG team for fixing—sometimes as often as 30 times a day. "We'd say, 'Look at this. If this was a real body, there'd be love handles,'" says Tang.

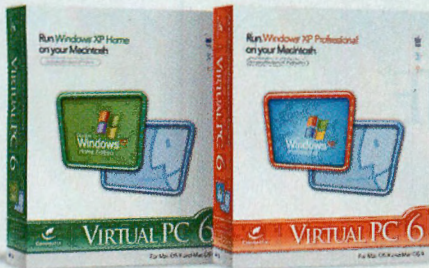
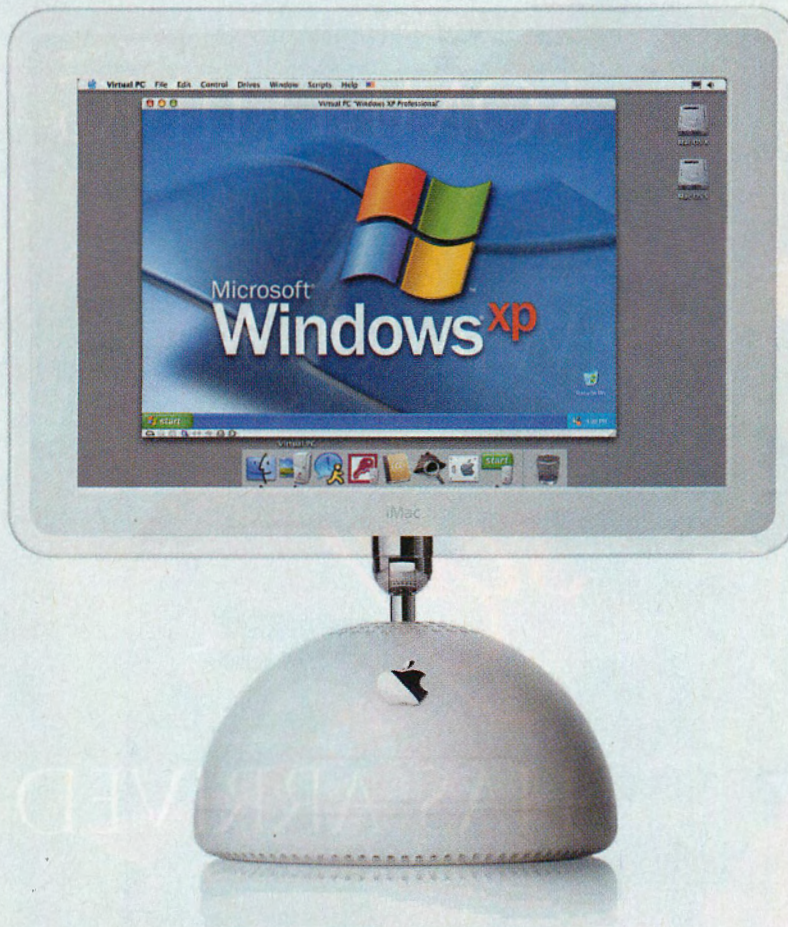
This process continued until they finished each sequence, and ultimately the entire movie—and Mann and Tang say Macs made it easier. "We would be pulling our hairs out," says Tang, "if we didn't have tools like the Mac and Photoshop."

Knowing what effect such frustration and anger might have on Bruce Banner, we're pleased that the Mac helped keep things mellow during the creation of *The Hulk*.

Though she's glad Lou Ferrigno isn't reprising his role, Kris Fong is convinced that the Hulk looks more like ex-baseball player Jose Canseco than like Eric Bana.



# Universal appeal.



## Work the way you want to with Virtual PC for Mac.

Sure, you can run Windows on your Mac. Simply install Virtual PC™ 6 and you can run Windows applications, access PC networks, share files with PC-based colleagues and use PC-only Internet services. We've also added some very cool new features like the Dock Start Menu that lets you launch PC applications right from the Mac OS X Dock! For more information, please visit [www.connectix.com/index\\_mac](http://www.connectix.com/index_mac)

Connectix Virtual PC uses genuine Windows® Operating Systems

© 2003 Connectix Corporation. Connectix, the Connectix logo and Connectix Virtual PC are trademarks of Connectix Corporation. All other trademarks are property of their respective holders.







SOMETHING

WICKED

*sexy*

HAS ARRIVED

BLOODRAYNE™



ASPYR™  
www.aspyr.com



Blood and Gore  
Strong Language  
Violence

©2002 Terminal Reality. Developed by Terminal Reality. The Aspyr logo is a trademark of Aspyr Media, Inc. Mac and the Mac logo are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. ©2002 Majesco Sales, Inc. All Rights Reserved. The BloodRayne logo and characters are trademarks of Majesco Sales, Inc.



**We can't help it.** Every time Apple unveils another miracle of industrial design, we feel compelled to experience it not just front to back, or side to side, but also *inside out*. In other words, we need to see what's under the hood.

So what else could we do but dissect the 17-inch PowerBook G4 and behold its inner beauty with our very own eyes?

Just remember, don't try this at home if you value your PowerBook and its warranty—although we're happy to report that this PowerBook suffered no harm or ill effects from our autopsy.

# Inside the 17-Inch PowerBook

by Niko Coucouvanis  
photography by Mark Madeo





## SPRING HINGES

The PowerBook's lid seems to defy gravity, swinging through its entire range of motion with little friction—yet somehow the screen stays put (and straight) at any angle. These two straps of tightly wound steel (aka the helical counterbalance spring assembly) are torqued down sufficiently to keep the oversize yet starlet-thin screen perfectly straight and taut. That's a whole lot of torque.

## SPEAKERS

See those black speaker-looking things? Well, those *are* the speakers, which are fed by the PowerBook's Snapper sound circuitry. Unfortunately, the 17-inch PowerBook doesn't have the midrange-enhancing third speaker that the 12-inch model has.

## HARD DRIVE

We affectionately call this pair of high-density metal platters (technically speaking, a 60GB Toshiba MK6021GAS) the PowerBook's Achilles heel. Why? It's a slow drive, spinning at 4,200 rpm (faster laptop drives spin at 5,400 rpm), which Apple likely chose for its low power requirements. On the plus side, tiny rubber rings on the drive's mounting brackets act as shock absorbers.

## Number of...

Pounds	6.8
Inches	15.4 by 10.2 by 1.0
Megabytes of included RAM	512
Pixels in huge-ass screen	1,296,000
Fiber-optic keyboard-backlight threads	270
Minutes spent performing this autopsy	60
Screws removed to accomplish this autopsy	21
Dollars we'd be in debt if this autopsy had failed	3,299

## PROCESSOR AND L3 CACHE

(processor: underneath)

Right here is the Level 3 cache, and directly opposite on the other side of the motherboard is the 1GHz G4 processor. The 1MB cache improves the processor's efficiency by keeping frequently used information and instructions close at hand, accessible via a dedicated bus where the bits can flow at ridiculously fast rates (up to 3.2 GBps) without interference from other system components.

## I/O CONTROLLER (underneath)

If a PowerBook's processor is the brain, its I/O (input/output) controller is the central nervous system. Known as Intrepid on the 17-inch, the I/O controller is an integrated circuit that keeps all the bits and bytes flowing to where they need to go. Besides controlling the front-side bus and system RAM, this jack-of-all-trades chip governs the FireWire, Ethernet, AGP, PCI, and both ATA buses (Ultra ATA/100 for the hard drive and ATA/33 for the SuperDrive).



## AMBIENT LIGHT SENSORS

Potatoes have eyes, and now so do PowerBooks...sort of. These babies are the ambient light sensors you've heard so much about. They monitor the ambient light wherever your PowerBook happens to be, and kick on the fiber-optic lighting system under the keyboard whenever they sense that you're in a dark room. Proving that Apple engineers are gods among men, these sensors also control the LCD screen's backlighting.

## FANS

Cooling all the PowerBook's hot circuitry is a pair of blower-style fans—the one on the left is in charge of the processor; the one on the right handles the video chip. Printed on each are the words *Magnetic Levitation System*, which we first thought was the secret to the Big 'Book's surprisingly light weight. We were disappointed to discover this label simply described the fans' bearing technology.

## VIDEO CHIP (underneath)

We hate calling the PowerBook's bountiful screen a resource hog, but those 1.3 million pixels (1,440 by 900) can't push themselves. The sizable screen requires a brawny video system, and that's exactly what it's got, courtesy of nVidia's GeForce4 440 Go graphics chip. The 440 Go features a processor clock speed of 189MHz and a 64MB frame buffer in addition to its 64MB of DDR SDRAM.

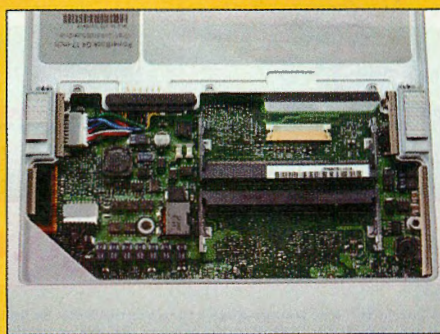
## SUPERDRIVE

The SuperDrive comes from Matsushita rather than Pioneer or Sony, which make the DVD burners in Apple's desktops. This isn't an extra-cost BTO (that's built to order, not Bachman-Turner Overdrive) add-on—the SuperDrive is standard issue on all 17-inch PowerBooks. Notice the cable connecting the SuperDrive to the motherboard—it's flat, as is the hard drive's connector cable. When the whole machine is only an inch tall, every single vertical millimeter really counts.

## On the Flip Side

Underneath the PowerBook is the battery bay. Next to it are two slots for RAM (the 'Book comes with one 512MB PC2700 333MHz DDR SDRAM SO-DIMM<sup>1</sup> memory module—which we removed for this picture). This arrangement not only provides easy access when you upgrade your RAM, it also contributes to the sturdy feel of the keyboard. Previous PowerBooks featured removable keyboards for RAM access—and consequently offered a less-sturdy typing experience.

<sup>1</sup>Gaze in awe at the new MacAddict acronym-length record of 32 characters, which demolishes our previous 23-character record set on page 40 of our Nov/02 issue.



Associate Editor Niko Coucouvanis hopes that Steve Jobs doesn't read MacAddict so he doesn't kill Niko for taking apart this PowerBook.



# The **must have** Internet security pack for Mac OS X!

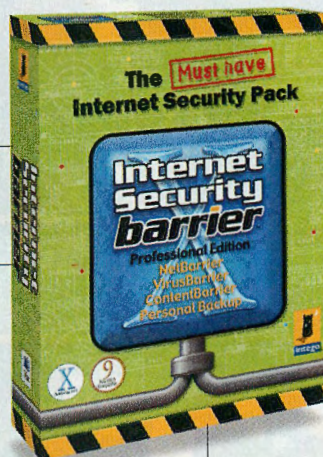


The first Internet security solution for Mac



Protect your kids from inappropriate content

Take care of all your backup needs with a single program!



Personal Antivirus for Mac

## Intego Internet Security Barrier X (Professional Edition)

Full protection from the dangers of the Internet.

Includes Intego NetBarrier X, VirusBarrier X, ContentBarrier X, Personal Backup X

only  
**\$129<sup>95</sup>**

You think the Internet is safe. Think again...

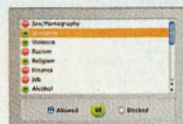


### Intego NetBarrier X

- Personal Firewall
- Antispyware
- Privacy and Monitoring

starting at\*  
**\$49<sup>95</sup>**

Don't let your kids use the Internet on their own!



### Intego ContentBarrier X

- Content Security
- Parental Control
- Web Filter

starting at\*  
**\$39<sup>95</sup>**

Viruses are smarter than ever...



### Intego VirusBarrier X

- Simple
- Fast
- Automatic repairs
- Virus Alerts

starting at\*  
**\$34<sup>95</sup>**

When was the last time you backed up your files?



### Intego Personal Backup X

- Back up
- Restore
- Clone
- Synchronize your data

starting at\*  
**\$29<sup>95</sup>**



Buy now:

**512-637-0700**

**www.intego.com**



*we protect your world.*

\*Call for more details. Macintosh, Mac and the Mac logo are registered trademarks of Apple Computer. Intego, the Intego logo, NetBarrier, the NetBarrier logo, VirusBarrier, the VirusBarrier logo, ContentBarrier, the ContentBarrier logo, Personal Backup, the Personal Backup logo and we protect your world are registered trademarks of Intego.



What's *MacAddict* doing reviewing monster-movie action figures? This is no garden-variety Godzilla pictured here—this is FireWire Dino, a fully functional four-port FireWire 400 hub. The Dino can't handle the FireWire 800 hard drive we reviewed this month, but he arrived just in time to interface with the new iPod—lucky lizard. In the near future, we'll pit a 1GHz iMac against a 1GHz eMac, and let 'em duke it out for the consumer-Mac crown.

**X** Compatible with Mac OS X or later.

**9** Compatible with Mac OS 9 or earlier.



If we were shopping for this type of product, this is the one we'd buy.

## ThisMonth:

- 44 15GB iPod MP3 player
- 45 20-Inch Cinema Display LCD monitor
- 54 d2 DVD-RW FireWire 400 DVD-RW drive
- 50 Enigma 1.1 3D puzzle game
- 55 FireWire Dino FireWire 400 hub
- 46 i950 Photo Printer six-color inkjet printer
- 48 InTools 1.0 Adobe InDesign plug-ins
- 54 iPod Armor iPod case
- 52 Mac FlipAlbum 3 photo-presentation software
- 49 Master of Orion 3 strategy game
- 53 Mercury Elite Pro FireWire 800 hard drive
- 47 Optio 430RS 4-megapixel digital camera
- 50 PowerWave USB audio interface and amplifier
- 54 Presentation Remote presentation controller
- 55 TextWrangler 1.0 text editor
- 55 Universal Media Drive memory-card reader
- 45 Wireless Optical Desktop Special Edition keyboard and mouse
- 52 World Book 2003 Jaguar Edition electronic encyclopedia
- 51 Xenofex 2 Photoshop plug-in suite

### PLUS:

## TheHotList

- 56 The best of the best from recent reviews.

## MacAddict RATINGS

MacAddict RATED  
●●●●●  
**AWESOME**

You'll be blown away.

MacAddict RATED  
●●●●○  
**GREAT**

You'll be impressed.

MacAddict RATED  
●●●○○  
**SOLID**

You'll be satisfied.

MacAddict RATED  
●●○○○  
**SO-SO**

You'll be disappointed.

MacAddict RATED  
●○○○○  
**LOUSY**

You'll be pissed off.



# 15GB iPod

## MP3 PLAYER

And we thought the original iPod was cool (Feb/02, p44). Now it looks like a frumpy late-1980s minivan when parked next to the new, oh-so-racy third-generation iPod. Apple's latest version of its market-leading MP3 player redefines "insanely great."

When we opened the box containing our 15GB test unit, the first thing we noticed was how much was in it. Sharing the box with the iPod was a dock (more on that later), a thin and flexible 70-inch FireWire cable, a handsome case with a belt clip, a compact AC-to-FireWire charging brick, a six-pin-to-four-pin FireWire adapter (for the peecee crowd), high-quality earbuds on a 45-inch cable, a clip-on remote on a 35-inch cable, and an iPod-size drawstring pouch for toting around all the accessories. The box also contained a CD with both Mac (iTunes) and Windows (MusicMatch) software, documentation, and a smattering of spoken word samples from Audible.com.

After we freed the iPod from its protective clear-plastic shield—with "Don't Steal Music" prominently displayed in four languages—we were impressed by its diminutive dimensions: over 20

## Apple's latest market-leading MP3 player redefines "insanely great."

percent thinner and about 14 percent lighter than our old 10GB iPod, and with a new curved-edge faceplate that makes it seem thinner still.

From its solid-state controls to its redesigned ports, everything about the iPod exudes class. Its 2-inch LCD screen's LED backlighting, for example, while



**Rarely is a sequel so much better than the original. Think *Godfather II*.**

not as bright as the electroluminescent backlighting in earlier models, to our eyes makes the display easier to read.

Repositioning the control buttons—also solid state—above the scroll wheel was also a smart move; they're now easier to navigate without undue thumb contortions. Their red backlighting is a touch of design genius, since red is the ideal color for your eyes to adjust to in the dark. Even the top-mounted hold button has a more-positive feel.

And about those redesigned ports. The headphone port now has a next-door-neighbor port containing the pins that control the remote. The FireWire port has been moved to the bottom of the iPod, and is now a multipin slot rather than a simple six-pin port. Do these extra pins imply

future uses for the remote port and multipin FireWire slot? Only Steve knows—and he's not talking.

The FireWire slot mates with a connector in the aforementioned battery-charging and iTunes-syncing dock—a 2.6-by-3.1-by-.6-inch slab of white plastic that holds the iPod at a comfortable reading angle, and that includes a line-out audio port and a slot for the multipin FireWire cable. Two other classy dock touches: a nonskid underside and a friendly three-note chime that tells you the iPod has been correctly seated. Nice.

After loading 11.5GB of tunes into the iPod in 45 minutes, we were able to listen for 8 hours before its rechargeable battery died—over an hour less than our 10GB iPod used to play before its battery started to age.

The iPod's version 2.0 software adds a sleep timer and alarm to the clock, two new games (Parachute and Solitaire), and

an On-The-Go playlist that lets you create playlists...uh...on the go rather than only from the host Mac's iTunes. Sound quality is excellent for both MP3 and AAC files—half of our testers said the new iPod sounded better than the old, half said the reverse, and all said the perceived difference was minuscule.

One last note: When we listed the accessories that came packed in the iPod box, we neglected to mention two that prove you can count on Apple to provide that little extra something—soft foam earbud covers and a tiny plastic plug to protect the FireWire slot. Both are small and light—and easy to lose, so Apple includes an extra pair of earbud covers and an extra slot plug. Thanks, guys.

—Rik Myslewski

PHOTOGRAPHY BY MARK MADEO

iPods, left to right: third-generation 30GB and 15GB, first-gen 10GB, and second-gen 20GB. Together they can hold either 18,700 4-minute songs or one 52-day drum solo.



**COMPANY:** Apple  
**CONTACT:** 800-795-1000 or 408-996-1010, [www.apple.com](http://www.apple.com)  
**PRICE:** \$399

**REQUIREMENTS:** Mac: built-in FireWire port, Mac OS 10.1.5 (10.2 or later recommended). Windows: PC with built-in FireWire or USB 2.0 port, or with Windows-certified FireWire or USB 2.0 card; Windows ME, 2000, or XP

**GOOD NEWS:** Totally, insanely cool. Gorgeous. Compact. Great features. Improved buttons and backlighting.

**BAD NEWS:** Highly scratchable. Parachute game is hard to win. (OK, so we're reaching...)

**MacAddict RATED**  
●●●●●  
**AWESOME**



# Wireless Optical Desktop Special Edition

## KEYBOARD AND MOUSE

In a beautiful white finish with chrome touches, both members of Microsoft's Wireless Optical Desktop duo look and feel great. The touch of the keyboard is just the way we like it—responsive and clicky

(meaning the keys make a nice hearty click when you press them). The two-button scroll-wheel mouse is the same as the Wireless Optical Mouse Blue we reviewed—and liked—in our January issue (p56), only

this one is white. And the best part is that one USB receiver talks to both mouse and keyboard, which cuts down on cable clutter.

The keyboard's chrome buttons are preprogrammed to do things like launch your Documents, Pictures, and Music folders; eject the CD tray; and call up your default email app and Web browser. The coolest

parts are the play, stop, volume, and other buttons that control iTunes.

If you still begrudge Microsoft its questionable due, you'll find a few things that will make your blood boil. The keyboard features Alt and Start keys where the Command and Option keys should be (although they work just fine—it's just the principle of the matter). Another annoyance is the keyboard software. You can't reassign a key to launch just any app—you must choose from a list (which includes many Microsoft apps). So you can't reassign, say, the Messenger button to open iChat.

A few more gripes: There's no power button on the keyboard. Also, as of press time, the software only supported Mac OS 9 and OS 10.1, so you can't do things like assign function keys. Microsoft promises a Jaguar update in May.

If you can live with these annoyances, this is a sweet set of hardware. But hurry—this special edition is only available for a limited time. If you miss out, you'll have to settle for the regular black and silver (go Raiders!) version.—Cathy Lu



**COMPANY:** Microsoft  
**CONTACT:** 888-218-5617,  
www.microsoft.com  
**PRICE:** \$84.95

**REQUIREMENTS:** USB-equipped Mac,  
Mac OS 8.6 to 9.x or 10.1, 30MB disk space

**GOOD NEWS:** Attractive. Keyboard has a really nice feel. Single receiver for both mouse and keyboard cuts down on cords.  
**BAD NEWS:** Keyboard labeled for Windows users. Microsoft-centric software.

**MacAddict RATED**  
●●●●●  
**SOLID**

# 20-Inch Cinema Display

## LCD MONITOR

Apple's 20-inch Cinema Display, with its wide-format 1,680-by-1,050-pixel resolution, is a great display for movie enthusiasts, graphic designers, and any other Mac user persnickety about image quality. And at \$1,299, it won't quite break the bank.

As with other Apple LCDs, the 20-inch Cinema Display is outfitted with a translucent, upward-tilting form factor and two powered USB ports. It also has the unique-to-Apple ADC connector, so hooking it up to an ADC-equipped Mac takes about 30 seconds and hooking it up to a DVI-connected PowerBook (using

Apple's DVI-to-ADC connector) takes only about a minute.

In our test photographs of faces and food, the display handled subtle color nuances well, showed sharp contrast, and a good level of brightness. We barely noticed any horizontal or vertical viewing-angle problems. Spec-wise, its 350:1 contrast ratio and 230cd/m2 is on par with other 20-inch displays, although you'll find slightly brighter and higher contrast models in the same price range (see "Add 3 More Inches!" Jun/03, p30, for info on a few other 20-inch LCDs).

You really can't go wrong with an Apple



Cinema Display if you've got the cash and a video card that supports it. Those who have older video cards will need to upgrade, but weren't you looking for an excuse to do that anyway?

—Narasu Rebbapragada

**COMPANY:** Apple  
**CONTACT:** 800-795-1000 or  
408-996-1010, www.apple.com  
**PRICE:** \$1,299

**REQUIREMENTS:** G4; Mac OS 10.2 or later; nVidia GeForce2 MX, GeForce3, GeForce4 MX, or GeForce4 Titanium, or ATI Radeon 7500, 9000 Pro, or 9700 Pro graphics cards; ADC port (or DVI-to-ADC adapter)

**GOOD NEWS:** Great design and image quality.  
**BAD NEWS:** Brighter and higher-contrast LCDs available for the same price.

**MacAddict RATED**  
●●●●●  
**GREAT**





This suave-looking printer isn't perfect, but it can produce fantastic prints with just a little effort on your part.

## i950 Photo Printer

SIX-COLOR INKJET PRINTER

The latest in Canon's line of iPrinters is the i950 Photo Printer, and it's a fine specimen of inkjet. Sporting six individual-color ink cartridges and spraying out 2-picoliter droplets (through 3,072 nozzles), the i950 pleased us with its speedy, quiet operation, accurate color (most of the time), and slower-than-most ink consumption. But we're not so thrilled with its bundled software and driver—though they are Mac OS X-friendly and come in the box, which is a step in the right direction.

Setting up the i950 is a breeze if you've ever set up a multitank inkjet printer; if

### The prints looked just short of fantastic.

you haven't, the illustrated poster of setup instructions walks you clearly through each step, from inserting the printhead and ink tanks to installing the driver and aligning the printhead. Which brings us to the good part—that printhead alignment function, along with the whole BJ Printer Utility kit, is now integrated into OS X's Print Center. In the past, we had to track down the printer utilities manually in our Applications > Utilities folder, so Print Center integration

is a welcome improvement. The BJ Printer Utility also handles busywork such as cleaning the printhead, checking the ink nozzles, and giving you a graphical display of the level of ink remaining in each tank.

This printer supports all of the latest inkjet juju, such as borderless printing (in OS 10.2 or later), index printing for printing multiple images per sheet, basic color correction, and some special effects we'll never use, such as Simulate Illustration. Printing from Photoshop, iPhoto, and the supplied ImageBrowser software (more on that in a bit) taught us that borderless printing only works when you print from ImageBrowser. We couldn't get a completely borderless print out of iPhoto or Photoshop, despite futzing with all of the driver's settings.

The OS X-compatible ImageBrowser software is adequate (and welcome), but not terribly impressive. Its editing tools are

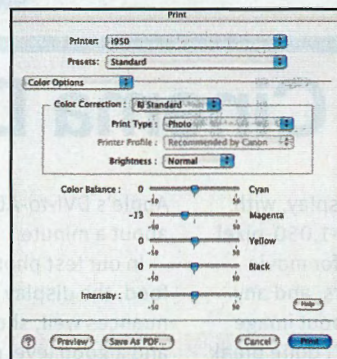
limited to Crop, Color Adjustment (Hue, Saturation, and Lightness sliders), and image resizing, but it gets your photos from the camera to the Mac to the printer, and that's what it's all about. You also get PhotoStitch, a fun app for stitching a series of images into panoramas (if this sells you on the i950, know that you'll need a tripod and some patience to get a decent panorama out of *any* software).

We were pleased to see high-quality, 8.5-by-11-inch borderless color photos come out in under 2 minutes—that's fast. The prints looked just short of fantastic when we printed to Canon's Photo Paper Pro, with minimal loss of detail in the shaded parts and just a slight twinge of magenta in certain skin-tone and concrete colors. Turning down Magenta in the Color Balance section of the driver's Color Options setting cured the latter problem.

The same photos also looked great on Canon's more-affordable matte photo paper. If you use the matte paper, take heed—we had a hard time distinguishing its print side from its back side and wasted a few sheets and some ink printing washed-out, mottled prints on the wrong side. (Tip: Look at the paper in sunlight and print on the whiter side.) Speaking of wasted ink, the i950 is surprisingly frugal with the

pigment—after cranking out 30 8.5-by-11-inch and 20 4-by-6-inch color prints at maximum quality, the ink level information showed our photo cyan and photo magenta at about 40 percent remaining and about 20 percent of the yellow ink gone, while black, cyan, and magenta appeared full. A visual inspection revealed that the other tanks weren't completely full, but close.

We've seen better photo printers, but for the price, the i950 is quiet, fast, and pretty accurate with color. We were also impressed with its modest appetite for ink, which makes this printer more affordable in the long run. —Niko Coucouvanis



Turn down the magenta a bit, and photos come out nearly perfect.

**COMPANY:** Canon  
**CONTACT:** 800-652-2666,  
www.canon.com  
**PRICE:** \$249.99

**REQUIREMENTS:** USB-equipped  
Mac, Mac OS 8.6 to 9.x or 10.1 and later,  
20MB RAM (128MB for OS X)

**GOOD NEWS:** Fast and quiet. Frugal with ink. Prints most photos superbly. Good text too.  
**BAD NEWS:** Slightly magenta-happy. Borderless printing doesn't always work. A little pricey.

**MacAddict RATED**  
●●●●●  
**SOLID**



# Optio 430RS

## 4-MEGAPIXEL DIGITAL CAMERA

There's a lot to like about Pentax's 4-megapixel Optio 430RS; it's a svelte, stainless-steel beauty with plenty of features that most point-and-shoot digicams lack. Though the Optio has its quirks, none is fatal.

For starters, the Optio 430RS has a bigger, brighter optical viewfinder than many others in its class, and you can adjust it to suit your eyesight. It also packs 11MB of built-in memory (BYO CompactFlash card) and a Manual mode for setting aperture and shutter speeds to creatively control your images.

### It's a beauty with plenty of features that most point-and-shoot digicams lack.

Granted, the aperture choices are somewhat limited: f-2.8 or f-5.0 when the lens is at its widest field of view and f-4.8 or f-9.2 at maximum telephoto (most

to flip the mode dial to playback so we could view our results. Surprise! There's no dedicated playback mode. Instead, you press the OK button (centered in the four-way rocker switch on the camera's back) to view your last shot, then use the rocker switch to navigate back and forth through the shots. This allows the camera to stay in the record mode so you're always ready to capture the moment.

Ironically, though, you can't take another picture for at least 4 seconds when the camera's set to its highest resolution. Still, unless you're shooting action sequences, this shouldn't be a killer, just a minor annoyance. There is an alleged burst mode, but it's just as slow. Shutter lag (from the time you press the shutter until the picture



PHOTOGRAPH BY MARK MADEO

Pentax packs a lot of pixels into this svelte silver case.

onscreen guide, and then reposition the guide to take the second image. Of course, your subjects can't be moving, but people in the foreground are OK as long as they can hold their pose for a few seconds. The 3D mode is nifty, but nothing to base a purchasing decision upon.

The camera lacks video out (a surprising omission, considering it's a standard feature on most digicams), but it has plenty of other niceties: a logical layout, easy-to-access menus, a night-scene mode, manual focus, a silent-movie mode, eight digital filters for special color effects, and a 62-city world time map. You can also shoot time-lapse photos, move to within 4 inches of your subject, and bring up a histogram to make sure your exposure is right on before you shoot.

The Optio 430RS is powered by a 3.7-volt rechargeable Lilon battery and includes an external charger. It ran down in about an hour with the 1.5-inch LCD and flash in use about half the time—you'll need a spare if you do more than occasional shooting. The sharp and accurately colored images we captured pleased us, though the camera sometimes slightly overexposed very bright scenes. Setting the exposure control to the minus side easily corrected that.

Overall, this diminutive digicam packs good pixel power and performance into its rugged, sensible design. If you want a digicam companion that can go up mountains, down rivers, or across deserts, the Optio 430RS should take it all in stride.—Arthur Bleich



The Optio 430RS can capture extremely sharp images, as shown in this lion statue and surrounding foliage.



We were also impressed with its accurate colors and fine detail in both shadowed and highlighted areas.

cameras offer a range). But coupled with shutter speeds from 4 seconds to 1/1,000 second, there's enough variety to freeze fast action or come up with a nice soft-focus background for a portrait.

After shooting a few pictures, we went

is actually taken) is also a bit on the long side, but acceptable.

One of the Optio 430RS's neat features is a 3D mode that captures and then lets you view stereo pictures using an included viewer. You shoot the first image using an

PHOTOGRAPH BY ARTHUR BLEICH

**COMPANY:** Pentax  
**CONTACT:** 800-877-0155, [www.pentax.com](http://www.pentax.com)  
**PRICE:** \$499.95 (street)

**REQUIREMENTS:** USB-equipped  
Mac, Mac OS 8.6 to 9.2 or 10.1  
or later

**GOOD NEWS:** Excellent design. Compact but not cramped. Good image quality. Simple operation.  
**BAD NEWS:** Slow shot-to-shot time. No video out. Burst mode no faster than regular shooting.

**MacAddict RATED**  
●●●●●  
**GREAT**



# InTools 1.0

ADOBE INDESIGN PLUG-INS

Software plug-ins usually fall into one of two categories: those that provide features their parent program lacks and those that provide a different—and presumably better—interface for features their parent program has. InTools is a newly released collection of six plug-ins intended for use with InDesign 2, and contains plug-ins from both categories. Depending on your InDesign habits and needs, any one of them might be your ticket to InDesign bliss.

If you're a new InDesign user who once used QuarkXPress (and who isn't these days?), you may find yourself resorting to old habits when working with InDesign—for example, looking for a Modify dialog. Like the Modify dialog in QuarkXPress, the InModify dialog contains several controls for modifying objects, and like QuarkXPress, the controls

## Any one of these plug-ins may be your ticket to InDesign bliss.

vary depending on the type of object (Picture Frame, Text Frame) you select. Although it doesn't add any features to InDesign, the InModify dialog makes modifying objects easier and faster by combining many object-modification controls that are otherwise scattered among several InDesign palettes.

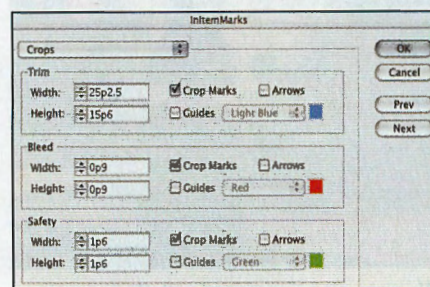
Like the Merge feature in QuarkXPress, InPathfinder lets you combine multiple objects to create a single object. InDesign's built-in capabilities (Compound Path) in this area are limited, so if you need to create complex shapes or you're a QuarkXPress convert who lived by the Merge feature, InPathfinder fills a big hole in InDesign. Illustrator users will find that the controls in the InPathfinder palette are similar to Illustrator's Pathfinder feature.

InNudge adds a palette that lets you move and rotate objects incrementally according

to your specified default Nudge and Rotate values. In addition to nudging items by clicking icons in the palette, you can also

use the keyboard arrow keys, and when you do, the current Nudge value applies. This one will spare our mousing hand a lot of fatigue.

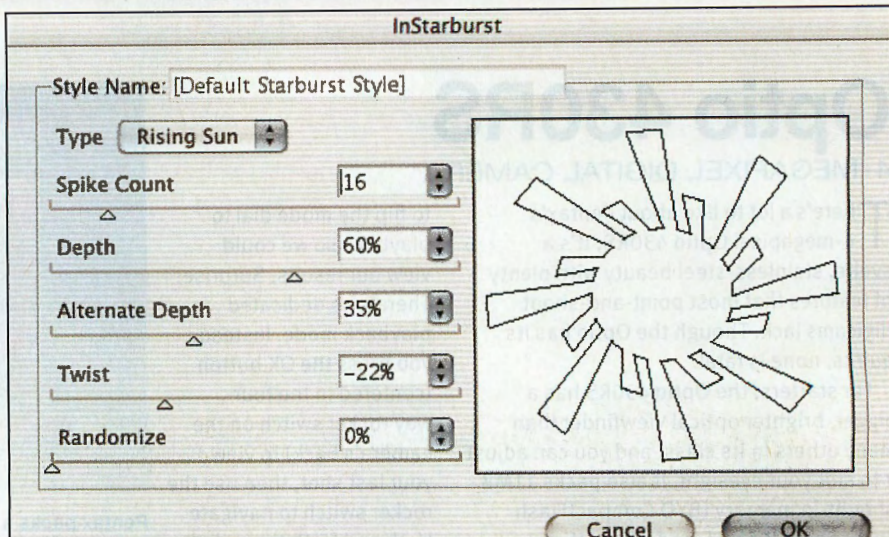
If you crave more options than InDesign's Polygon feature provides, InStarpburst may be just the fix. InStarpburst adds a tool to the InDesign toolbar that lets you create complex starburst shapes, as well as a palette for creating, modifying, and deleting starburst styles. Other options include the ability to choose among ten built-in spike styles, to alternate the depth of spikes, to twist starburst shapes,



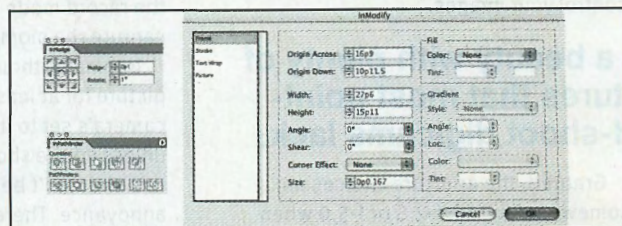
**InItemMarks adds more than just convenience—this is the only way to roll your own crop and print marks in InDesign.**

and to create random spikes. The possibilities are endless. If you require industrial-strength starburst capabilities, InStarpburst alone is worth the price of admission.

With InItemMarks, you can add crop marks



**We've got a thing for starbursts, so InStarpburst is our favorite part of InTools.**



**These productivity-enhancing, object-tweaking tools saved us tons of time and mousing.**

and registration marks to individual objects and pages. When you create crop and press marks, InItemMarks creates the marks with InDesign objects (frames, lines, and so on) and places them on a new layer. If you like to create your own crop and press marks, or if your printer has requirements InDesign's built-in Marks & Bleeds print options can't handle, InItemMarks is the ticket.

Finally, InPrint lets you click and drag to select an area of a page or spread for printing or export. In addition to InDesign's export support (PDF, EPS, HTML, XML, SVG, and SVG Compressed), InPrint adds TIFF, ScitexCT, JPEG, and GIF support.

Ultimately, rating plug-ins is a contextual endeavor. A single plug-in can be worth the price of an entire collection if it fills a crucial hole in your workflow. On the other hand, a large collection of plug-ins has little value if the plug-ins don't make you more productive. InTools' ability to streamline object-modifying, -grouping, and -nudging chores, and of course its starburst tool, earned this toolbox a spot in our InDesign kit.

—John Cruise



**COMPANY:** ALAP  
(A Lowly Apprentice Production)  
**CONTACT:** 888-818-5790,  
www.alap.com

**PRICE:** \$99.99 (single user), \$449.99  
(five-pack), \$849.99 (ten-pack)  
**REQUIREMENTS:** Mac OS 9.1 or  
later, Adobe InDesign 2.0

**GOOD NEWS:** Solid performance. Intuitive, InDesign-like interface.  
**BAD NEWS:** Relatively small number of plug-ins for price. Some plug-ins only marginally useful.







Info screens offer access to diplomatic messages, votes in the Orion senate, and a matrix that shows the current status of all alliances.

terraforming, bioharvesting centers, and mines. Lots and lots of work to do, right?

Ah, this is where the game developers got a bit too cute. They invented planetary viceroys, automated brains to run your planets and tend to your spreading civilization. In fact, they do so much that there's little left for you. You determine where to send your space fleets, set up a few spies, allocate your research time, take care of any diplomatic feelers that come your way, and click the button that starts the next turn. And that's about it.

That's good news for those who find micromanagement tedious. If you prefer to make your own choices, you can overrule your viceroys' decisions, but you have to check back frequently to make sure your adjustment stays in place—otherwise the viceroy will take charge again as soon as you disappear.

Combat is in real time and very slow. You

can issue detailed attack orders, but battle fleets are so small graphically that it's probably best to let the AI do your fighting. Just point your fleet at the enemy, click the Attack button, and sit back to watch the battle.

Multiplay works well. Orion is fun to play against other humans, and it's faster. Most turn-

based civ-building games allow players to issue between-turn orders one after another, and the delay can be interminable. But Orion requires players to issue orders simultaneously, so turns come more quickly.

The system requirements are modest, thanks to the paucity of eye-candy graphics, but the game has good balance. If you can work your way through the difficult early learning curve, you'll find yourself hooked. Orion is deep, rich with detail, and filled with strategic choices. Don't play it near a clock. You'll be horrified by how much time it can eat up.—John Lee

# Master of Orion 3

## STRATEGY GAME

If you're a fan of galaxy-size, turn-based, civilization-building strategy games overloaded with mind-numbing detail, you're in for a treat. Master of Orion 3 is here. And it's huge—bigger than its predecessors, more complex, and stuffed with information.

The new Orion space frontiers are clearly more complicated than in previous games. You get light years of history, 16 rival factions vying for territory, piles and piles of planetary systems, and enough information screens to satisfy an anal-retentive librarian.

As with all civilization-building games, you spend your time utilizing the four standard Xs (explore, expand, exploit,

else moves in. Eventually you encounter other species—that's when the fun (and the final X, exterminate) begins. Choose your weapons—will you beat the enemy with your military forces, drive them to financial ruin through economics, or finesse them with diplomacy?

Unfortunately, getting to the battles takes time. Movement at the beginning is slow, almost ponderous. It can take 50 or 60 turns of exploration, colonization, research, and spaceship-building before confrontation and combat finally emerge to liven up the game. But once you start clashing with alien races over territory, the game gets hot and stays hot.

Until then, try not to let the deluge of detail snow you under. This game is so heavily loaded with information that it may overwhelm even experienced gamers. It's all available on special situation screens, where you can find data on the 16 customizable alien races, more than 300 technologies in six schools of science, and hundreds of star systems and planets on huge galaxy maps. Each newly occupied planet needs its own micromanaged budget, taxes, industry, spaceships,



Battles in Orion involve massive space fleets, so the view is generally small but intriguing.

## Orion 3 is way bigger than its predecessors.

and exterminate). You begin at home base with a couple of scout ships and a colony ship, exploring and colonizing your own star system. Then you spread out to gobble your corner of the galaxy before someone

**COMPANY:** MacSoft  
**CONTACT:** 866-512-9111,  
www.macsoftgames.com  
**PRICE:** \$49.99

**REQUIREMENTS:** Mac G3 350MHz  
or faster, Mac OS 8.6 or OS X 10.1.5 or  
later with 128MB RAM, 800MB free hard  
disk space

**GOOD NEWS:** Loaded with alien races and options.  
Richly detailed backstory. Modest system requirements.  
**BAD NEWS:** Automated viceroys leave little to do.  
Skimpy graphics.

**MacAddict RATED**  
●●●●●  
**SOLID**



# Enigmo 1.1

## 3D PUZZLE GAME

We never thought Chinese water torture would seem like fun—then Enigmo came along. Now our dreams are filled with an endless procession of water drops...drip, drip, drip.

Enigmo's premise is simple. The goal of the game is to herd water droplets dripping from a spigot into a receptacle using a variety of water-directing widgets. Your

**It's like Chutes & Ladders, only fun.**

widgets (located in a parts inventory list at the side of your screen) include bumpers, which bounce and redirect the stream up and over obstacles; slides, which gently guide the drops across shorter distances;



particle accelerators, which give the stream a boost in speed and trajectory; and sponges,

which soak up drops and conform them into a smooth stream.

All you do is drag a widget from the parts inventory into the stream of droplets to change the flow of water to your advantage. For instance, you could just drag the bumper over and tweak its angle and positioning so that it effectively redirects the flow of water into the container. That's the first level; as you progress, the distance (and the maze of walls and openings) between spout and bucket grows, as does the booty in your parts inventory. It's like Chutes & Ladders, in which you use widgets to get where you want to be, only it's actually fun. Manipulating the parts is a click-and-drag



**Can't you just hear the arcade-game music? Enigmo is a puzzler done right.**

affair, and easy to master.

For even more waterworks fun, create custom games with up to 50 levels each, which you can share with other Enigmo players. You'll be amazed at how much time this simple game sucks out of your life, but that's the sign of a great game.

—Niko Coucouvanis

9

**COMPANY:** Pangea Software  
**CONTACT:** 512-367-8116,  
www.pangeasoft.net  
**PRICE:** \$19.95

**REQUIREMENTS:** 400MHz G3, Mac OS 9.2 or 10.1 or later, 128MB RAM, ATI Rage 128 or nVidia GeForce2 graphics card (Radeon or GeForce3 recommended)

**GOOD NEWS:** Addictive fun. Challenging. Building your own levels is way easy.

**BAD NEWS:** Addictive, yet fairly mindless. Music might drive you insane.

**MacAddict RATED**



# PowerWave

## USB AUDIO INTERFACE AND AMPLIFIER

The Griffin PowerWave is a small (a bit larger than two iPods), versatile audio gizmo, combining in one piece of hardware a variety of tools for the Mac audiophile.

First, as an input device, PowerWave sports stereo RCA ins and outs, and a 1/8-inch mic in, plus a headphone jack for latency-free monitoring; a level switch lets you boost mic level signals—from a turntable, for example—so you can pipe the sound into your Mac at line levels. We used it to archive old records we couldn't find in the Apple Music Store (for a detailed description of the process, see "How to Digitize Vinyl and Audiocassettes," p60). If you'd rather make your own music, you can also use



**Catch this wave and you'll be rockin' audio into and out of your Mac.**

the PowerWave to record voices through a mic or instruments via direct line in.

Although the PowerWave doesn't require any specific software, you'll need something to capture and manage the sounds it inputs; the bundled disk offers trial versions of Peak LE 3, Deck 3, and MegaSeg. We used a Sound Studio 2.1 trial (www.felttip.com).

As an output device, the PowerWave can act as a mini desktop amplifier, allowing you to power home speakers through an included breakout box that connects to standard stereo-speaker cables (Griffin also sells the box solo for \$25)—handy indeed for the laptop or iPod owner who wants to pump up the party on the go. But wait, there's more: A special jack custom-made for Apple's Pro Speakers allows you to connect them via the PowerWave to any USB-enabled computer.

If we have any complaint, it's the purposeless big blue light on top that turns off only when you unplug the PowerWave. We'd lose the light and make the device that much more compact.

If your needs are limited to getting sound cleanly into your Mac, you'll find cheaper solutions—such as Griffin's \$35 iMic—but the included output options make the PowerWave a good value.

—Christopher Imlay

9

**COMPANY:** Griffin  
**CONTACT:** 615-399-7000,  
www.griffintechnology.com  
**PRICE:** \$99.99

**REQUIREMENTS:** USB-equipped Mac, Mac OS 9.1 or later

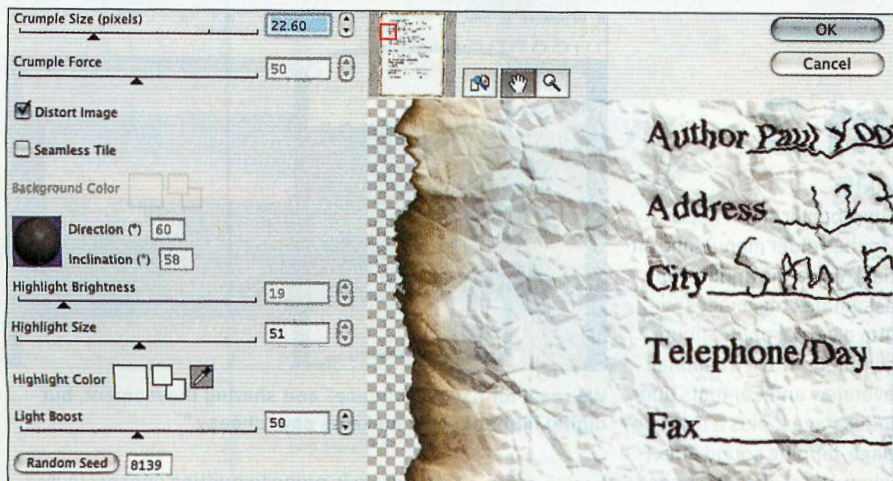
**GOOD NEWS:** Easy. Simple. Useful.

**BAD NEWS:** Gratuitous blue light is silly.

**MacAddict RATED**







**Xenofex's Burnt Edges and Crumple filters give this document that hip distressed look.**

# Xenofex 2

## PHOTOSHOP PLUG-IN SUITE

Alien Skin Software has a knack for making Photoshop filters that beg to be used in gleefully creating mischief, but that retain enough legitimate uses to justify their purchase. Xenofex 2 is no exception, offering retooled versions of some old favorites as well as brand-new filters for photo-manipulating fun (or work, if you must).

Xenofex 2 boasts 14 filters (4 brand-new ones), although in all honesty the Classic Mosaic filter appears to descend directly from its predecessor (Baked Earth), and

## Xenofex is way fun to use.

despite what the manual says, version 1 *did* have a Shatter filter. These are minor quibbles, especially in light of the improvements made in other areas. The Rounded Rectangle, Origami, Stamper, Shower Door, and Distress filters have been replaced with Cracks, Rip Open, and Burnt Edges. Most of these are self-explanatory (what do you think Little Fluffy Clouds does?), but can often be combined in unexpected and creative ways to generate truly unique effects.

Even the Flag filter, which we feared would look cheesy, was

surprisingly realistic—real enough for Web work, at least. Flag and Crumple both feature a pseudo-3D distortion, which warps or crinkles your image to depict its dimensionality more accurately (and to show off the lighting effects, presumably). Electrify and Lightning—two similar effects with different implementations—allow you to select the color, amount of branching, and other variables involved in whipping up some electricity, and were way fun to use.

Of all the filters, Constellation and Puzzle seemed like the ones we'd use least frequently, but if you're in the business of making puzzle Web sites, you'll appreciate the ability to knock out random pieces and fiddle with the connectors, groove width, and highlight size of your puzzle bits. That's the thing about Xenofex—all of the components perform admirably, but we have a hard time envisioning a need to use any of them more often than every few months.

We encountered one small-but-annoying disappointment: the uncharacteristically rushed-seeming manual. In addition to its false claims of five new filters, it's littered with typos that a good proofread would have caught. Granted, these flaws don't constitute a deal-killer, and the fact that we've noted them at all is a testament to how little we found to complain about in Xenofex 2.—Paul Yoon



**COMPANY:** Alien Skin  
**CONTACT:** 888-921-7546, [www.alienskin.com](http://www.alienskin.com)  
**PRICE:** \$129, \$99 (sidegrade), \$69 (upgrade)

**REQUIREMENTS:** Power Mac; Mac OS 9.1 or 10.1 or later; 64MB RAM; Adobe Photoshop 6.0 or Photoshop Elements 2.0 or later, or Macromedia Fireworks MX or later

**GOOD NEWS:** Great improvements since version 1. Cool effects. Solid interface.

**BAD NEWS:** Prone to hideous misuse by Web designers. Lackluster manual. Limited uses.

**MacAddict RATED**  
●●●●●  
**GREAT**



# Who's looking at the files on your old computer?

## - NEWS FLASH -

Associated Press  
January 2003

"... simply deleting a file, or even following that up by emptying the 'trash' folder, does not necessarily make the information irretrievable."

Don't risk putting your computer files into the wrong hands.

Protect your email, financial figures, client correspondence, address book, student records, business plans, medical records, graphics, HR files, and more.

SuperScrubber permanently erases all the files and data from your hard drive or partition.

Make SuperScrubber a part of your personal and business security plans.

It's easy to use.  
It's bargain priced.  
It's the smart thing to do.

**\$29.99**

**SuperScrubber**  
Erasing the Risk of Data Theft



**Jiiva**

[www.SuperScrubber.com](http://www.SuperScrubber.com)



# Mac FlipAlbum 3

## PHOTO-PRESENTATION SOFTWARE

When we think of e-books, we generally think of literature retrofitted for ultimate portability on handheld PDAs: electronic books. Little did we know, E-Book Systems also makes Mac FlipAlbum—software for creating virtual

FlipAlbum icon (or import via the Folder menu), and sit back while the application assembles the images into a virtual photo album, complete with a thumbnail overview and Contents and Index pages, plus a realistic page-flipping sound effect when you click to flip pages.

Venture into the preferences and you can turn off the silly flip sound; create a playlist of background music from MP3s (or WAV or MIDI files); or set up autoflipping and all manner of themed patterns, colors, and layout options for the cover and pages. Further customization includes Annotations—Stickies-style notes with customizable color, size, font, and placement. Unfortunately, the



**We're all for saying "cheese" and sharing the moment, but digital flipbooks just make us say "cheesy."**

## We'll stick with iPhoto's classier slide shows.

photo albums. And yes, flipping faux book pages on the Mac's desktop is as ridiculous as it sounds.

If you don't want any custom titles, background music, or other jazz, FlipAlbum's



default modus operandi is the definition of *quick 'n' dirty*. Just drag a folder full of images onto the Mac

program is prone to quitting unexpectedly when you start customizing the book; its general performance felt clunky on an 800MHz TiBook.

We'll endure a lot of inconvenience if the end result justifies the effort, but that's not the case with Mac FlipAlbum. Frankly, we find it silly at best. We'll gladly forego FlipAlbum's buggy gimmickry for iPhoto's infinitely classier slide shows.—*Niko Coucouvanis*



**COMPANY:** E-Book Systems  
**CONTACT:** 866-532-8080  
or 408-625-8000,  
www.flipalbum.com

**PRICE:** \$39.95 (boxed), \$34.95 (download)  
**REQUIREMENTS:** 450MHz G3 (700MHz  
G4 recommended), Mac OS 10.1.3 (10.2  
recommended), 256MB RAM

**GOOD NEWS:** Makes slide shows look less corporate.  
**BAD NEWS:** Makes slide shows look awfully cheesy.

**MacAddict RATED**  
○○○○○  
**LOUSY**

# World Book 2003 Jaguar Edition

## ELECTRONIC ENCYCLOPEDIA

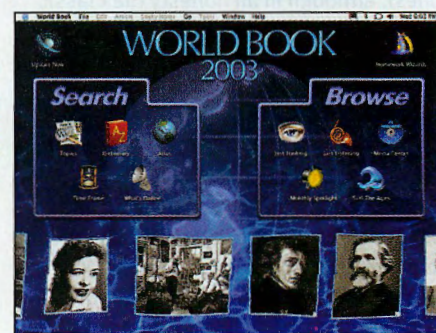
We've always been fans of the World Book encyclopedia. If there's any subject you want to know about—be it ocelots, Apple, or World War II—the World Book CD will boil it down to a good, clean overview. What this CD-ROM doesn't do

according to the type of music you select from the Just Listening menu. For instance, choose Jazz and you'll see images of jazz greats sailing by—clicking any picture will take you to more info.

Unfortunately, the oohs and ahs end there. Most of the articles suffer from Salon.com syndrome—text paragraph after text paragraph with few pictures and even fewer sound and video clips. For instance, our aforementioned search on *ocelot* didn't even provide us with a picture.

World Book does have some nice features, though. With an Internet connection, you can update the content to get the major news headlines for each day from the past month. The Chart and Timeline wizards help you

The main interface is the best-looking part of World Book 2003.



put together materials you might need for a report. The Quiz wizard is a basic tool for testing yourself. The Notepad allows you to grab pictures from the CD and create a basic layout for a report. The Atlas's cool globe allows you to calculate the distance between major cities. And you can double-click any word to get a definition from the included dictionary.

World Book 2003 is definitely a good tool for students of all ages—but it has the potential to be so much more.—*Cathy Lu*

## Definitely a good tool for students.

is take full advantage of all the Mac's cool multimedia capabilities—and that's too bad.

The coolest thing about World Book 2003 is its main interface. The menu options appear on top of a beautiful rippling blue background that would make Steve Jobs proud. Pictures scroll along the bottom



**COMPANY:** World Book  
**CONTACT:** 800-967-5325, www.worldbook.com  
**PRICE:** \$68, \$39.95 (upgrade from 2002 edition)

**REQUIREMENTS:** 300MHz Power Mac  
or faster, Mac OS 10.2 or later (will run on  
10.1.5 but without 10.2-specific features),  
128MB RAM, 130MB disk space

**GOOD NEWS:** The best place to get an overview  
of just about any subject. Cool main interface.  
**BAD NEWS:** Lacking in multimedia goodness.

**MacAddict RATED**  
○○○○○  
**SOLID**





The see-through look may be passé, but the drive inside is pure tomorrow.



# Mercury Elite Pro

## FIREWIRE 800 HARD DRIVE

The Mercury Elite Pro FireWire 800 hard drive from Other World Computing (OWC) is built around a snappy 180GB 7200 rpm IBM Deskstar drive coupled with an Oxford 922 bridge that feeds two FireWire 800 ports. A FireWire 400 and a USB 2.0 port are also included.

The first FireWire 800 drive we reviewed, the LaCie d2 200GB FireWire 800 drive (see *Reviews*, Jun/03, p47), strutted its best stuff when opening and transferring large files. The Mercury Elite Pro displays the same tendency in spades. In fact, when opening a 2GB Photoshop file, the Mercury Elite Pro opened it over 13 percent faster than both the LaCie d2 and the 120GB Seagate Barracuda ATA V inside our test platform, a Dual 1.42GHz Power Mac.

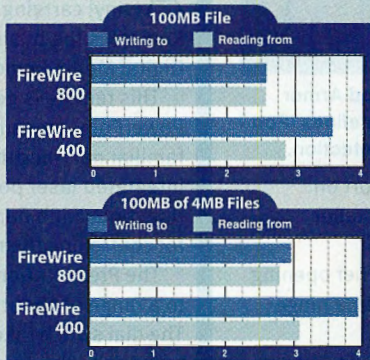
File transfers were equally impressive, with the Mercury Elite Pro keeping pace with the LaCie d2 when reading and writing 2GB files, and edging ahead slightly when reading and writing a 100MB file and 100MB of 4MB files. The big surprise came when we ran our most drive-head-thrashing test: transferring a folder containing 100MB of 4KB files. Writing this packet-o-pain to the Mercury Elite Pro took only about half as long as writing it to the d2, and it read the

same folder nearly three times as fast.

Our one quibble is its case—it's easy to open should you want to slip a larger drive into it, but it's a wee bit cheesy compared to other drive vendors' cases. No big deal, though—it's a great drive.—*Rik Myslewski*

## 800 vs. 400

The Mercury Elite Pro is as fast or faster than other FireWire 800 drives we've tested—but how does it perform against itself when hooked up to a fast Mac's FireWire 400 port? Quite well indeed.



All Times are in seconds. Shorter is better.  
We tested on a Dual 1.42GHz Power Mac equipped with 512MB RAM and running Mac OS 10.2.4.

**COMPANY:** Other World Computing  
**CONTACT:** 800-275-4576, [www.macsales.com](http://www.macsales.com)  
**PRICE:** \$379.99

**REQUIREMENTS:** FireWire- or USB-equipped Mac  
(FireWire 800 port recommended)

**GOOD NEWS:** Fast when transferring or opening files over FireWire 800—even very small files. Quiet. Good software bundle.

**BAD NEWS:** Easy-open case isn't terribly solid.

**MacAddict RATED**  
**GREAT**



# PUPPY®

Fingerprint Authentication  
for  
Mac OS X



Your fingerprint  
is your password.



[www.PuppySuite.com](http://www.PuppySuite.com)

Pacific Software Publishing, Inc.  
13427 NE 20th St. Suite #120,  
Bellevue, WA 98005  
TEL: 800-232-3989 Ex. 2  
426-957-0808 Ex. 2  
Email: [sales@pspinc.com](mailto:sales@pspinc.com)

MSRP under \$200. Reseller inquiries welcome.  
©2003 Pacific Software Publishing, Inc. All rights reserved.  
PUPPY and PUPPY Suite are trademarks of Sony Corporation.  
Mac and the Mac Logo are trademarks of Apple Computer, Inc.,  
registered in the United States and other countries.



# d2 DVD-RW

## FIREWIRE 400 DVD-RW DRIVE

Burning DVDs is great, but what if your Mac isn't naturally endowed with a SuperDrive? LaCie's d2 DVD-RW drive packs the super Pioneer DVR-105 drive mechanism, which burns DVDs at 4X speed. That works out to 4.7GB in about 15 minutes. The d2 comes with software that lets you author basic video DVDs without spending beaucoup bucks on a pro application like DVD Studio Pro (or on a new Mac).

The d2's software, CaptyDVD, is basically a knockoff of Apple's iDVD 3.

## We give d2 the nod over its competitor, the Devideon.

With CaptyDVD, you can import QuickTime DV movies—from iMovie or Final Cut, for instance—and then use lots of prefab background and button themes to build your navigation menus (thankfully

you can also import your own menu art). Other highlights include the ability to add audio clips to menus, to create photo slide shows, and to generate a Scenes menu quickly by placing chapter markers in a video clip. Unfortunately, CaptyDVD creates menus that can only go forward and backward, instead of jumping nonlinearly from one item to another.

CaptyDVD is versatile too: It lets you encode video at different quality levels, so you can fit more than an hour on a DVD-R disk (but image quality suffers a bit). On the downside, CaptyDVD isn't nearly as easy to use as iDVD (we actually had to read the manual!), its themes aren't as slick-looking as iDVD's, and it doesn't support motion menus,

where the background is a moving video image. Overall, CaptyDVD is about on par with Formac's Devideon software (see *Reviews*, Apr/03, p53), but CaptyDVD's chapter markers are less limiting than Devideon's. LaCie also sells CaptyDVD separately for \$149, but we'd pass.

We still prefer our built-in SuperDrive and iDVD, but we give LaCie's d2 the nod over its competitor, the Devideon, for a superior case design and slightly more flexible software.—*Helmut Kobler*



LaCie's rugged d2 case is starting to grow on us—this one houses a fast, 4X DVD-RW drive.

X  
9

**COMPANY:** LaCie  
**CONTACT:** 503-844-4500,  
www.lacie.com  
**PRICE:** \$359

**REQUIREMENTS:** FireWire-equipped  
Mac, Mac OS 9.1 or 10.1.2 or later (10.1.5  
or later for CaptyDVD software), 4GB  
disk space recommended

**GOOD NEWS:** Fast drive (DVD 4X2X12X, CD 16X8X32X).  
DVD-authoring software included.

**BAD NEWS:** Authoring software not intuitive. Menu themes  
can be hokey.

MacAddict RATED  
GREAT

## iPod Armor

### IPOD CASE

If we could pick any material in the universe for our iPod case, padded anodized aluminum would be it, so we're naturally smitten with Matias's iPod Armor. It's like a mini Zero Halliburton for your iPod. First-generation iPods match the Armor's portholes better than more-recent iPods do, but the case's portholes can accommodate the audio-out port on second-generation iPods as well. Sadly, the slightly taller third-generation iPods (see *Reviews*, p44) don't fit.

Accessing an armored iPod's controls requires either opening the case (it flips open toward you, clamshell-style, on a hinge at the bottom), or using the iPod's remote control.

If you're the type to throw your iPod in a backpack and go, this is the case for you; the cool look of anodized aluminum is just gravy.—*Niko Coucouvanis*



iPod Armor  
redefines iPod  
protection.

**COMPANY:** Matias  
**CONTACT:** 888-663-4263,  
www.ipodarmor.com

**PRICE:** \$49.95, \$54.95 (with belt clip)  
**REQUIREMENTS:** iPod (any size)

**GOOD NEWS:** Good looks. Rugged protection.  
**BAD NEWS:** Unyieldingly rigid. Annoying without  
iPod remote controller.

MacAddict RATED  
GREAT

## Presentation Remote

### PRESENTATION CONTROLLER

A svelte and lightweight device designed with travel in mind (vinyl carrying pouch included), Keyspan's Presentation Remote is the business-class cousin of the company's way-cool Digital Media Remote (*Reviews*, Feb/00, p67).

This remote is geared for controlling Apple Keynote or Microsoft PowerPoint presentations, with the familiar next-and-back dial switch, an integrated laser pointer, and even a directional nub flanked by two buttons for controlling the mouse.

The Presentation Remote performed up to a range of about 40 feet, as advertised. The dial switch takes some getting used to, as does the cursor-control nub, but if you're bent on remotely controlling your presentations, learning the right touch is time well spent.—*Niko Coucouvanis*



Presentation Remote  
lets you step away  
from the keyboard.

**COMPANY:** Keyspan  
**CONTACT:** 510-222-0131,  
www.keyspan.com

**PRICE:** \$79  
**REQUIREMENTS:** USB-equipped  
Mac, Mac OS 9.1 or 10.1.3 or later

**GOOD NEWS:** Three handy tools in one.  
**BAD NEWS:** Sparse documentation. Flimsy  
thumb switch. Frustrating mouse controller.

MacAddict RATED  
SOLID



# TextWrangler 1.0

## TEXT EDITOR

If you're looking for a no-frills word processor, keep looking. TextWrangler is a muscular text editor, but it doesn't have a word processor's specialized formatting or WYSIWYG font menus. It also doesn't have the Web tools—site directory support, tagging tools, syntax checking, and so forth—that make its BBEdit forebear so

## TextWrangler's kung fu is strong.

popular with the online crowd.

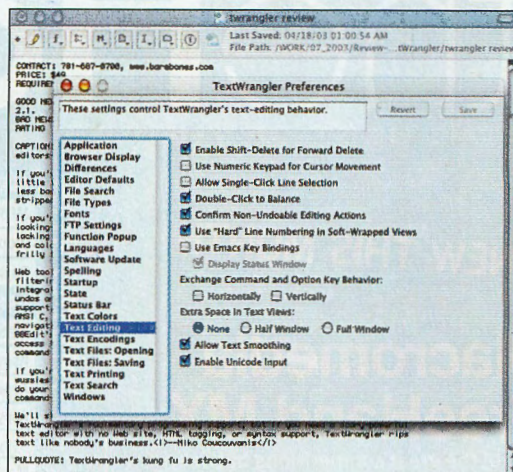
Web tools aside, however, TextWrangler's kung fu is strong; its grep searching, file filtering and general text munging is identical to BBEdit's, as is the FTP



integration, rectangular text selection, support for files up to 2GB, multiple undos and clipboards,

and plentiful preferences. In lieu of BBEdit's Web-coding support, TextWrangler provides syntax coloring and function navigation for more-traditional programming languages (ANSI C, C++, and Objective C), and integration with Apple's Project Builder 2.1 and later. TextWrangler also lacks BBEdit's Shell Worksheet feature, which gives OS X users direct access to the underlying Unix shell (although you can invoke TextWrangler from the Terminal's command line).

If you're one of those hard-core coders who thinks BBEdit's HTML tools are for wussies (in the old days, we typed out *all* our tags), but you still want to do your heavy text lifting through sensible dialog boxes instead of cryptic command-line tools, TextWrangler is made for you.



Look familiar? This general-purpose text editor carries on the respected BBEdit lineage.

We'll stick with BBEdit, despite TextWrangler's programming support (we prefer BBEdit's all-around overkill). But if you need a scary-powerful text editor with no Web tools, TextWrangler rips text like nobody's business.—Niko Coucouvanis

**COMPANY:** Bare Bones Software  
**CONTACT:** 781-687-0700, [www.barebones.com](http://www.barebones.com)  
**PRICE:** \$49, \$199 (5-user pack), \$349 (10-user pack)  
**REQUIREMENTS:** Power Mac, Mac OS 9.1 or 10.1.5 or later (9.2.2 or 10.2.4 or later strongly recommended)

**GOOD NEWS:** Fast and powerful grep searching. Integrates with Project Builder.  
**BAD NEWS:** Integrated FTP doesn't support SFTP. Not hugely different from the free BBEdit Lite.

MacAddict RATED  
GREAT

# Universal Media Drive

## MEMORY-CARD READER

If you rely on more than one type of Flash memory and you're tired of the clutter of media-card readers on your desk, LaCie has a solution: the Universal Media Drive.



Six media types, one drive.

Supporting six common media types (CompactFlash, SmartMedia, Memory Stick, SecureDigital, and MultiMediaCard), this svelte drive read every card we shoved into its face—the key word is *shoved*. While the drive let us read from and write to all manner of media, getting the cards into the drive caused us some minor angst. The CompactFlash slot in particular is tight.

As Flash memory evolves to faster speeds, we'll hold out for a FireWire multiple-media drive. Still, LaCie's offering is no slouch.—Niko Coucouvanis

**COMPANY:** LaCie  
**CONTACT:** 503-844-4502, [www.lacie.com](http://www.lacie.com)  
**PRICE:** \$29.95  
**REQUIREMENTS:** USB-equipped Mac, Mac OS 8.6 to 9.x or 10.1.2 or later

**GOOD NEWS:** Good looks, size, and performance.  
**BAD NEWS:** Media-card slots are a little tight. Not a FireWire device.

MacAddict RATED  
SOLID

# FireWire Dino

## FIREWIRE 400 HUB

FireWire hubs, like USB and Ethernet hubs, are difficult to review objectively. Either they work or they don't; after that, it's mostly a matter of personal taste. FireWire Dino is the coolest hub we've ever seen—it's a four-port FireWire hub built into a poseable Godzilla action figure—and it works.

The Dino got even cooler when we plugged in an iPod and its eyes and mouth lit up. Transferring files from the iPod to the Mac was only marginally slower when we connected the two via the Dino than it was with a direct connection.

Keep in mind that you'll need Dino's optional AC power supply if you plan on connecting more than one bus-powered device.

Hubzilla is way cool; just get one.—Niko Coucouvanis

**COMPANY:** CharisMac  
**CONTACT:** 530-885-4420, [www.charismac.com](http://www.charismac.com)  
**PRICE:** \$69.95, \$79.95 (with power supply)  
**REQUIREMENTS:** FireWire 400-equipped Mac

**GOOD NEWS:** Coolest hub design ever.  
**BAD NEWS:** Power supply and cables not included. No FireWire 800.

MacAddict RATED  
AWESOME



PHOTOGRAPH BY MARK MADEO

"This thing is much too big to be some lost dinosaur."  
—Niko Tatopoulos; *Godzilla*, 1998



# theHotList

THE BEST OF THE BEST FROM RECENT REVIEWS

**SHOPPING?**  
HERE'S WHAT WE  
RECOMMEND

## NEW THIS MONTH

### Macromedia FreeHand MX

One of the great competitions between Mac-software stalwarts is the ongoing FreeHand versus Adobe Illustrator smackdown. According to reviewer and pro artist Matt Osborn, "With FreeHand MX, Macromedia is back on top—for the time being, anyway."

### Power Over Ethernet

Reviews Editor Niko Coucouvanis always keeps an eye out for as-yet-unheralded products that solve nagging problems. Power Over Ethernet is a prime example. This simple set of cables allows you to mount your AirPort Base Station up to 250 feet from a power outlet. According to Niko, "It's a class act."



### LaCie d2

The first FireWire 800 drive we got our eager little hands on didn't disappoint. Editor in Chief (and storage freak) Rik Myslewski said in his review, "This small, quiet drive can be a real time-saver if your work involves large files."

## SOFTWARE

### AUDIO

MOTU Digital Performer 3	\$795.00	Feb/02, p58	This pro-audio app has a great array of features.
PropellerHead Software Reason 2	\$399.00	Mar/03, p50	It's the best software-synth bargain available today.
Roxio Toast with Jam 5	\$189.95	Sep/02, p49	Burn CDs, MP3 CDs, DVDs, and VCDs and edit audio.

### GAMES

Ambrosia Software Escape Velocity: Nova	\$30.00	Sep/02, p48	Enjoy the perverse thrill of galactic domination.
Aspyr Jedi Knight II: Jedi Outcast	\$49.95	Feb/03, p37	Fantastic gameplay with both weapons and The Force.
Aspyr Medal of Honor: Allied Assault	\$50.00	Oct/02, p43	The WWII first-person shooter is a surefire classic.
Aspyr NASCAR Racing 2002 Season	\$39.99	May/03, p57	Realistic NASCAR racing on a Mac? Believe it.
Aspyr The Sims Unleashed	\$29.95	May/03, p58	Pixel pets abound in the best Sims expansion pack yet.
MacPlay No One Lives Forever	\$49.99	Mar/03, p49	A beautiful spy, sly foes, nifty gadgets, fast action—nice.
MacSoft Max Payne	\$40.00	Dec/02, p42	Max seeks revenge—and gets plenty of it in this FPS.

### GRAPHICS & LAYOUT

Adobe InDesign 2.0	\$699.00	May/02, p50	Look out, Quark—Adobe's rival layout tool kicks butt.
Adobe Photoshop 7	\$609.00	Jul/02, p46	Picture-perfect pixel pusher moves to Mac OS X.
Adobe Photoshop Elements 2	\$99.00	Dec/02, p40	It has most of Photoshop's power for \$500 less.
FontLab 4.5.2	\$549.00	May/03, p53	The font editor all type geeks have been waiting for.
Macromedia Dreamweaver MX	\$399.00	Sep/02, p44	Our favorite Web-design tool gets a strong upgrade.
Macromedia Flash MX	\$499.00	Jul/02, p51	It started in animation; now it can do anything.
Macromedia FreeHand MX	\$399.00	Jun/03, p49	In the race with Adobe Illustrator, FreeHand pulls ahead.

### PRODUCTIVITY & UTILITIES

Apple Keynote	\$99.00	Apr/03, p48	This presentation app was built for Mac OS X—and it shows.
Bare Bones Software BBEEdit 7.0.1	\$179.00	Mar/03, p52	By far the most powerful text editor money can buy.
Microsoft Office v. X	\$499.00	Feb/02, p42	The 800-pound gorilla of productivity applications.
Script Software CopyPaste-X 1.5.1	\$20.00	Apr/03, p61	Shareware must be great to make the list. This clipboard is.

### VIDEO & ANIMATION

Adobe After Effects 5.5	\$649.00	May/02, p49	This motion-graphics stud improves its 3D powers.
Apple DVD Studio Pro 1.5	\$999.00	Oct/02, p55	Apple's essential DVD-burning app gets even better.
Apple Final Cut Pro 3	\$999.00	Apr/02, p45	This pro-level video editor is a real-time revelation.

## HARDWARE

### ACCESSORIES

Dr. Bott's extendAIR Direct	\$149.95	May/03, p51	Make AirPort Extreme's range noticeably more extreme.
MacWireless Power Over Ethernet	\$29.98	Jun/03, p61	Mount an AirPort Base Station 250 feet from AC power.
XtremeMac UFO	\$129.95	May/03, p59	If you own a G4 iMac, you gotta get this way-cool hub.

### AUDIO

Digidesign Mbox	\$495.00	May/02, p59	This audio interface is a traveling musician's delight.
-----------------	----------	-------------	---

### DIGITAL CAMERAS

Canon PowerShot S230 Digital Elph	\$399.00	Mar/03, p48	A great 3.2-megapixel camera in a tiny, low-cost package.
Nikon Coolpix 3100	\$340.00	May/03, p43	The best point-and-shoot digicam we've seen yet.
Olympus C-4000 Zoom	\$499.00	Jan/03, p52	Great image quality, 4 megapixels, and versatile controls.

### DISPLAYS

Apple Cinema HD Display	\$1,999.00	Aug/02, p40	This 23-inch, 1,920-by-1,200-pixel beauty inspires lust.
Formac gallery 2010 Platinum	\$1,399.00	Jan/03, p47	Bright, fast, huge—and it costs only \$.0007 per pixel.

### PRINTERS

Brother HL-A141870N	\$699.00	Aug/02, p45	Need a sturdy laser printer? This one's a workhorse.
Epson Stylus Photo 2200	\$699.00	Oct/02, p42	The most stunning photo printer we've ever tested.

### SCANNERS

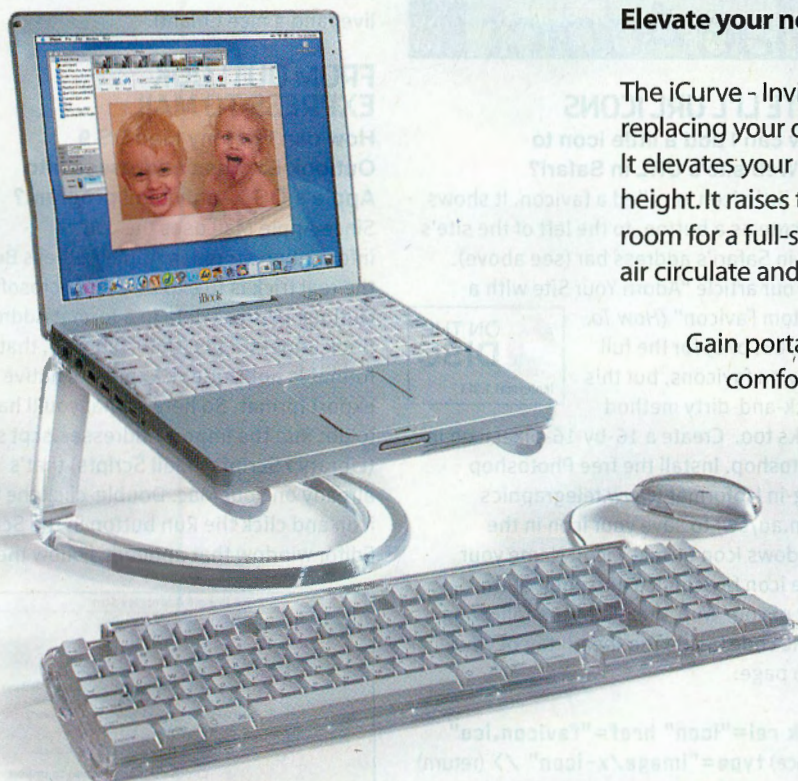
Canon CanoScan LiDE 30	\$99.00	Nov/02, p52	This entry-level scanner gets the job done inexpensively.
Epson Perfection Photo	\$399.00	Oct/02, p48	This sophisticated scanner also handles transparencies.

### STORAGE

LaCie d2 200GB FireWire 800	\$469.00	Jun/03, p47	FireWire 800 speed meets solid-as-a-rock construction.
Maxtor Personal Storage 5000XT	\$399.99	Feb/03, p44	Solid construction, push-button backup, and 250GB.
OWC Mercury Elite 160GB	\$349.95	Sep/02, p53	This handsome, sturdy drive is whisper quiet.
TDK veloCD	\$315.99	Jul/02, p54	FireWire-equipped CD-RW drive is freaky fast.



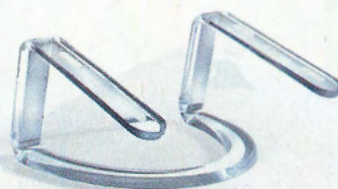
# i wanna take you higher...



## Elevate your notebook to create the perfect desktop

The iCurve - Invisible Laptop Stand is the key to replacing your desktop machine with a new notebook. It elevates your screen to a comfortable eye-level height. It raises the notebook off the desk - making room for a full-size keyboard and mouse. And it helps air circulate and keep your new 'hot' laptop cool.

Gain portability without sacrificing desktop comfort. Add an iCurve to your notebook and have the best of both worlds.



## iCurve Invisible Laptop Stand

JUST  
\$39<sup>99</sup>

EDITORS'  
MacAddict  
CHOICE



JUST  
\$45<sup>00</sup>

## PowerMate USB Multimedia Controller

- Great volume & play button for iTunes
- Perfect jog/shuttle wheel to edit iMovies
- Programmable for any application
- Solid aluminum with blue glowing base

NEW



NOW  
\$39

## iMic USB Audio Interface

- Now includes recording software & audio cable - everything you need to record albums and tapes to make MP3s & CDs
- Plug-and-Play simple, no install required



ONLY  
\$35<sup>00</sup>

## iTrip FM Modulator for iPod

- Play your iPod through any FM radio station in your car, truck or boat
- iPod Powered - no battery necessary
- Fits perfectly on top - no dongle or cable

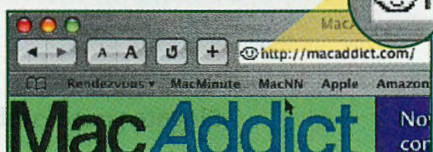
Now you have two **easy** ways to purchase your Griffin Technology product directly.  
**Order by phone** at 615-399-7000 or **order online** at [www.griffintechology.com](http://www.griffintechology.com).

GRIFFIN TECHNOLOGY

ORDER NOW

[www.griffintechology.com](http://www.griffintechology.com)

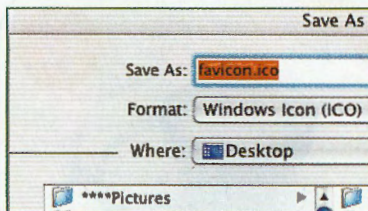


GOT A QUESTION?  
NEED ADVICE?**ask  
us** WE CAN HELP**CUTE LI'L URL ICONS****How can I add a little icon to my Web site's URL in Safari?**

That little icon is called a favicon. It shows up, cute as a button, to the left of the site's URL in Safari's address bar (see above). See our article "Adorn Your Site with a Custom Favicon" (*How To*, May/03, p70) for the full story on favicons, but this quick-and-dirty method works too. Create a 16-by-16-pixel icon in Photoshop. Install the free Photoshop plug-in Icoformat ([www.telegraphics.com.au/sw](http://www.telegraphics.com.au/sw)) to save your icon in the Windows Icon format (.ico). Name your little icon favicon.ico and put it at the root of your Web site. Place the following HTML code inside the <head> tag of your Web page:



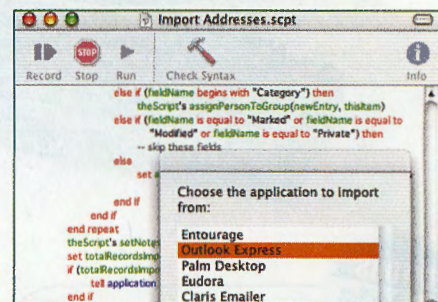
```
<link rel="icon" href="favicon.ico"
(space) type="image/x-icon" /> (return)
<link rel="shortcut icon" (space)
href="favicon.ico" type="image/x-
(no space) icon" />
```

**Use a Photoshop plug-in to save your favicon in Windows Icon (.ico) format.**

People browsing your Web site in Safari will now see your new favicon. We hear Hannibal Lecter takes his favicons with liver and a nice Chianti.

**FROM OUTLOOK EXPRESS TO MAIL****How can I get my Mac OS 9 Outlook Express addresses into Apple's OS X-only Mail program?**

Since Apple Mail uses the contact information stored in Apple Address Book, the real trick is to export your Microsoft Outlook Express data in a format Address Book understands. Unfortunately, that format is not Outlook Express's native export format. So here's what you'll have to do: Run the Import Addresses.scpt script (Library > Scripts > Mail Scripts) that's already on your Mac. Double-click the file icon and click the Run button in the Script Editor window that appears. Follow the

**Get those addresses out of Outlook Express and into Mail.**

onscreen prompts to import all of your Outlook Express addresses into Address Book. This script also lets you import addresses from Microsoft Entourage, Palm Desktop, Qualcomm Eudora, Claris Emailer, and Netscape.

**AIRPORT EXTREME PRINTING****My Ethernet LAN gains Internet access through an Airport Extreme Base Station. Can I plug my USB printer straight into the Base Station for all computers to use?**

Yes, all your wired and wirelessly connected computers will have access to the shared USB printer via the Airport Extreme Base Station's USB printer-sharing feature—provided that your Macs run Mac OS 10.2.3 (with Rendezvous support) or later and have the appropriate printer drivers installed.

**quick  
answers** TO QUICK QUESTIONS**VIEW STARTUP TEXT****What's Verbose mode?**

Starting up Mac OS X in Verbose mode (hold down Command-V during startup) reveals the white-on-black text of the startup sequence during startup.

**ACCESS STARTUP TEXT****How can I view my Mac OS X's startup text without starting up in Verbose mode?**

If you need to analyze your startup text after the fact, launch the Terminal (Applications > Utilities). Type `dmesg` and press Return. You'll get the information from your last startup.

**512MB is ideal for Mac OS X.****RULES ON RAM****How much RAM do I really need at home?**

Get as much as you can afford, but here are some guidelines: For the average Mac OS X user, 128MB of RAM isn't enough, 256MB of RAM is sufficient, 512MB of RAM is ideal, and 1GB is great but not necessary unless you're running pro apps.



## DIFFICULTY RATINGS

EASY

No whining—  
anyone  
can do this!

TRICKY

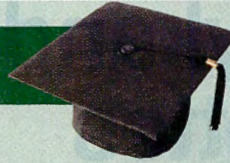
It'll take some  
effort, but you  
can do it.

TOUGH

This stuff's  
for the pros.

HAT COURTESY OF HEMERA

## UNIX UNIVERSITY



## REMOTE UPDATES

Can I run Software Update remotely via the command line?

Yes, use the `softwareupdate` command, which gives you a list (in text format) of all the available updates your Mac needs. To install one of the updates from the list, type `sudo softwareupdate item name`, replacing *item name* with the exact name of the update from the list. You'll need to enter your password, since `softwareupdate` needs to run as root to actually modify your operating system. This command is a great way to update remote computers or servers by logging into the computer via a telnet (SSH) session.

```
Software Update Tool
Copyright 2002 Apple Computer, Inc.

Software Update found the following new or updated soft
- QuickTime5.1.1
  QuickTime (5.1.1), 19960K - restart required

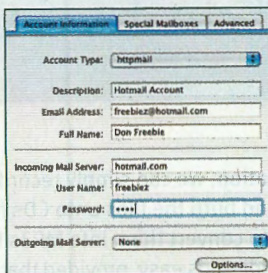
To install an update, run this tool with the item name
e.g. 'softwareupdate <item> ...'
[Home-1:~] buzz% sudo softwareupdate QuickTime5.1.1
Password:
Software Update Tool
Copyright 2002 Apple Computer, Inc.
Downloading "QuickTime"... 18%
```

Update remotely via the  
command line.

## GET YOUR HOTMAIL IN MAIL

How can I use Apple's Mail program to access my Hotmail account?

Use the open-source Mac OS X HTTP Mail Plug-in (<http://sourceforge.net/projects/httpmail-plugin>), which lets you configure Mac OS X's Mail to get email from a Hotmail account. Simply add a new account in the Accounts panel of Mail's Preference pane and choose



Use Mail to get your Hotmail.

`httpmail` as Account Type. Enter your Hotmail email address, name, password, and incoming mail server (`hotmail.com`), and click the OK button. Now Mail will check your Hotmail account, and you won't even

have to see all the ads. Be aware that you can't send mail via Hotmail this way.

## CREATE A CUSTOM LOGIN SCREEN

Can I customize the graphics in the Mac OS X login window?

If blue bores you, Sanity Software's Visage shareware utility (\$9.94, [www.stanford.edu/~keaka/visage.htm](http://www.stanford.edu/~keaka/visage.htm)) is a System Preferences pane that allows you to add your own custom login screen to Mac OS X. Just create a 353-by-264-pixel PDF file of your custom image and add it to Visage.

**Submit** technical questions or helpful tips directly via email ([askus@macaddict.com](mailto:askus@macaddict.com)) or c/o MacAddict, 150 North Hill Dr., Brisbane, CA 94005.



Six years of handling tech support for Apple, Power Computing, and a Texas school district have given Buz Zoller Mac superpowers.

## SAFE BOOT

What is Safe Boot mode in Mac OS X?

Holding down the Shift key during startup invokes Safe Boot mode, which disables all non-Apple drivers and loads a minimal system. It's helpful for troubleshooting.



Safe Boot mode in Mac OS X is kind of like starting up in Mac OS 9 with extensions off.

## RESTART WITH UNIX

Can you restart a computer or shut it down with Unix commands?

To shut down a computer from the command line, use the `halt` command. If you're not logged in as root, type `sudo halt`. To restart, use the `reboot` command.

## MAC OS 9 RAM LIMITS

What is the RAM limit for a computer running Mac OS 9?

Mac OS 9 can only recognize and use up to 1.5GB of RAM.

## ThisMonth



## 60 Digitize Vinyl and Audiocassettes

Can't fathom dropping 15 bucks to bring your dusty old Iron Maiden record into the modern age? You don't have to if you digitize it yourself—we show you how to record vinyl and tape on your Mac. We also show you how to clean up those clicks, crackles, and pops.

## 64 Create a Super Video CD

We showed you how to create a Video CD in our April issue. Now find out how you can manufacture your own movies and get near-DVD quality from a CD-R that plays on most standard DVD players. We even show you how to design your own menu screens.



## 68 Play Dance Dance Revolution on a Mac

Admit it. You've watched those kids play that Dance Dance Revolution game at the mall and you secretly want to try it out yourself, but ye olde embarrassment factor keeps you from busting a move. No worries. We show you how to dance to that groove in the privacy of your own home, plus how to create your own steps.



PHOTOGRAPH BY KRIS FONG AND MARK MADEO

PHOTOGRAPH BY MARK MADEO



# Digitize Vinyl and Audiocassettes

by Kris Fong

EASY

## WHAT YOU NEED

- Turntable with stereo receiver or preamp, and/or cassette deck
- Headphones or speakers (for monitoring)
- Records and/or audiocassettes
- Stereo RCA to 1/8-inch stereo miniplug cable (about \$5 at electronics stores)
- USB audio-input device if your Mac lacks an audio input (Griffin's iMic, \$35, [www.griffintechology.com](http://www.griffintechology.com))
- Audio-recording app such as Black Cat Systems' Audiocorder (donationware, [www.blackcatsystems.com](http://www.blackcatsystems.com)) or Felt Tip Software's Sound Studio (\$49.99, [www.felttip.com](http://www.felttip.com))

If you're too cheap to shell out \$9.99 for a digital download of one of your ancient records, then record your album yourself onto your Mac's hard drive.



We've spent a small fortune over the past 15 years, slowly replacing some of our favorite vinyl records and audiocassette tapes with their CD equivalents just so we could play the albums at work or on the go. But what about all those old records and tapes that contain a single great song, or the ones that are out of print, or the ones we can't seem to justify buying again? Rather than wait for KTEL's next *Best of the Screamin'*

'80s Hair Bands compilation, we can simply record our old albums and tapes on the Mac and burn the files onto CDs for play in the car or office, or use iTunes to convert them into MP3s for our iPod.

Digitizing analog recordings is easy, provided that you still have a turntable and/or cassette deck. If you're looking to turn your historic collection into CDs or MP3s, here's how. And for those interested in getting the best audio possible from a scratchy old record or hissy tape, we also show you how to clean up digital files.



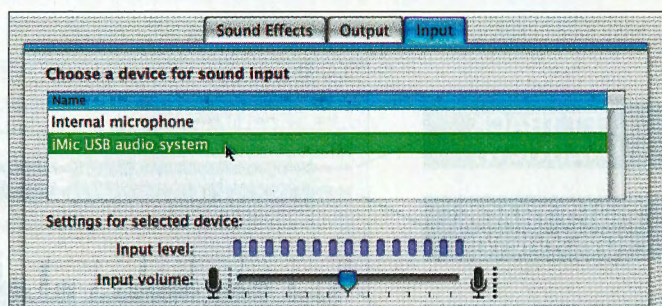
**1 Make the Connections** If cassette dubbing is your task du jour, connect the audio cable's RCA connectors to your cassette deck's left and right audio-out jacks. If you're ripping vinyl, you can't connect your Mac directly to a turntable because you need a preamp to boost the signal to line level. Instead, hook up the turntable to your receiver as you normally would or to a preamp like Griffin's PowerWave (\$100, [www.griffintechology.com](http://www.griffintechology.com); see our review on p50) or a cheapie \$20 Radio Shack device. Then connect the audio cable's RCA connectors to the receiver's or preamp's left and right auxiliary, tape record, or similar audio out. Next, plug the stereo miniplug into your Mac's audio-in jack. If your Mac lacks an audio in, you'll need a USB audio-input device to make the connection. Plug the USB device into your Mac's USB port, and then plug the audio cable's miniplug into the USB device.



If your Mac lacks audio in, Griffin's iMic supplies the needed audio jack via USB.



**2 Select Your Mac's Input** To monitor the sound, either plug headphones into your cassette deck or stereo receiver, or connect a pair of speakers to your receiver. We don't recommend monitoring sound from your Mac due to possible latency (sound delay) problems—you could wind up chopping off a song's beginning. Set your Mac's input to record either from its sound input (if your Mac has an audio-in jack) or via a USB device. Classic users: From the Apple menu, select Control Panels > Sound. Click the Input tab and select the desired input from those displayed. OS X users: Select System Preferences from the Apple menu, and click Sound to display its preferences. Then click the Input tab and select the desired input from those displayed.



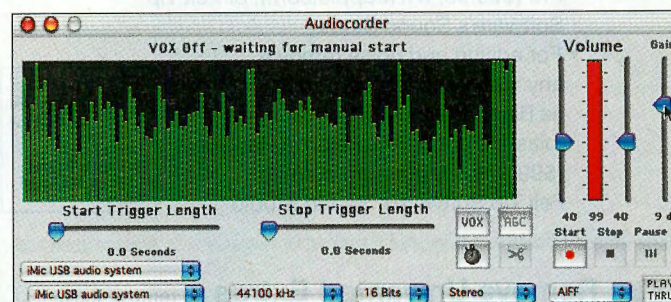
To get external audio into your Mac, choose the sound input for your setup in Preferences.

**3 Establish Quality Control** Stick a record on your turntable or a cassette in your deck, power everything up, and then launch your audio app. We used Black Cat Systems' Audiocorder—if you're not, apply these instructions to your own app. To get CD-quality audio, set your app to record 44.1kHz, 16-bit stereo sound in AIFF format—we selected 44100 kHz, 16 Bits, Stereo, and AIFF from Audiocorder's respective pop-up menus. To set the sound input, we also selected iMic USB Audio System from the pop-up menu under the Start Trigger Length slider (this automatically changes the pop-up underneath to the same selection). Choose your own input device from these pop-up menus.



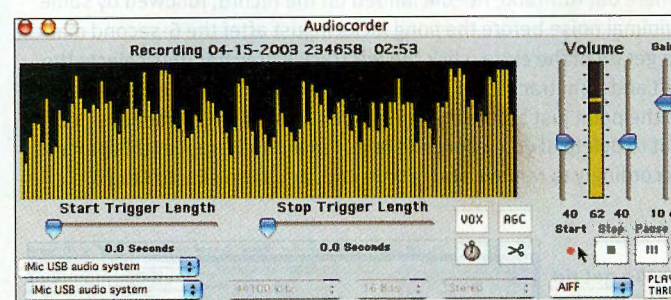
Because Audiocorder ignored our sound Input preferences (other apps don't), we chose the iMic input manually from the pop-up menu.

**4 Give It Some Gain** To preview the volume level coming into your Mac, start playing your record or tape. Adjust the Gain slider so that the audio level is strong—the bar should dance predominantly in whatever level color the app supports (usually green, yellow, or both; Audiocorder displays green when previewing and yellow when recording), without going into the red, which will cause distortion. Don't set the gain too low or you may end up with a hissy recording.



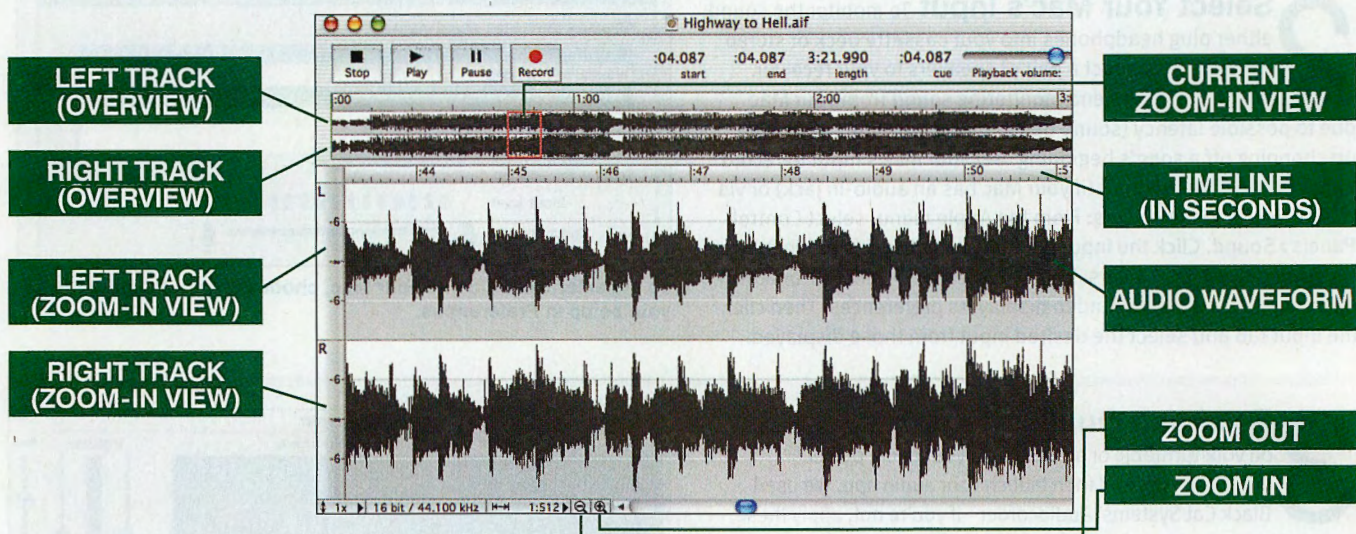
To prevent distortion, preview a bit of your album's volume level and take the Gain down a notch if the level spikes to red.

**5 Ready, Set, Record** You can record songs individually, or record an entire side of an album or cassette in one take and edit the file afterward. Cue up your first song, click Record in your audio app, and play the album or cassette. Keep an eye on the levels to make sure the audio doesn't peak to the red. If it does, stop recording, notch down the Gain a tad, and start again. When the song or side ends, click Stop, and then stop the song on your turntable or cassette deck. If the app doesn't save the file automatically, do so manually. Repeat for other songs. If you recorded songs individually and don't want to do cleanup work, you can burn these CD-ready files onto a CD-R as an audio CD, or use iTunes to convert them into MP3 files for play in iTunes or an MP3 player. If you need to do some editing, read on.



To digitize sound, just click Record, start playing your record or cassette, and keep an eye on those levels.





## Clean Up Digitized Audio Files

by Kris Fong



### WHAT YOU NEED

- For simple clip editing, any audio-editing app, such as Kumulipo's Jasmine (\$29.95, [www.kumulipo.com](http://www.kumulipo.com)), Apple's QuickTime Pro (\$29.95, [www.apple.com](http://www.apple.com)), or Felt Tip Software's Sound Studio
- For editing and noise removal, any audio-filtering app, such as Bias's Peak (\$499, [www.bias-inc.com](http://www.bias-inc.com)), Arboretum's RayGun (\$99, [www.arboretum.com](http://www.arboretum.com)), or Felt Tip Software's Sound Studio

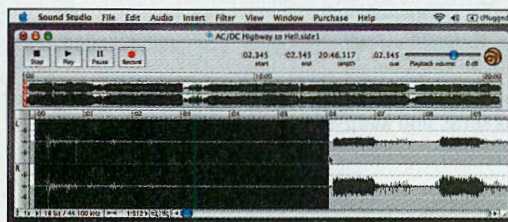


You've digitized your vinyl and tape collection, but your recordings sound more like a Rice Krispies jingle. While you should've thoroughly cleaned your records before taking them out for a spin, we won't make you redo the recording—you can't avoid a few clicks, crackles, and pops anyway. But you *can* clean up many minor noises and tape hiss after the fact.

Though you can't remove continuous noise without lowering sound quality, you can diminish it without making your music sound as if it were being piped in from a sewer. Here's how to do just that, as well as how to isolate individual songs from one collective recording and remove unwanted audio before and after a song. We used Sound Studio for everything—if you're not, just apply our instructions to your application of choice.

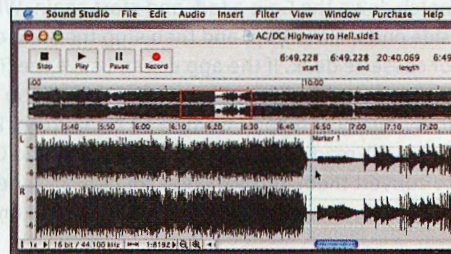
**1 Remove Unwanted Extras** To remove extra audio before a song, open the file in Sound Studio, click Play, and study the zoomed-in waveforms (bottom two tracks) as the playhead scrolls over them—the bigger the wave, the louder the sound. Silence appears as a straight, horizontal line. In our example, there are waveform spikes at the beginning where our turntable needle landed on the record, followed by some minimal noise before the song kicks in just after the 6-second mark. To get rid of the extra, click the left track's gray bar (this selects the left and right tracks simultaneously) and drag from the beginning to the point just before the song starts. From the Edit menu, select Cut to delete. If you recorded songs individually, repeat this process accordingly to remove stuff at the end, and then skip to step 3.

To get rid of a lengthy intro, just click and drag the waveforms to select and cut them.



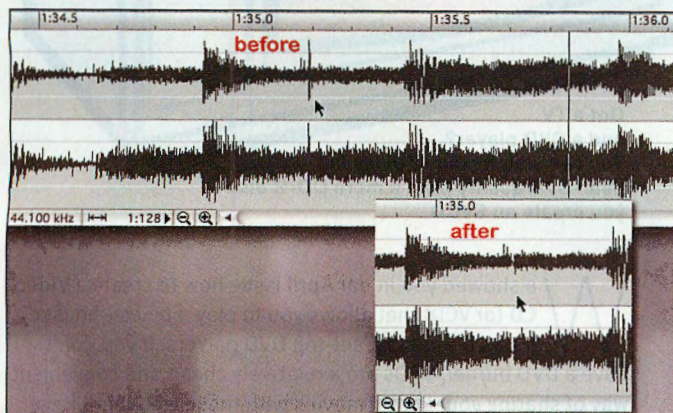
**2 Isolate Songs** If you recorded your songs collectively, isolate the songs by chopping up the file. Using the waveform overview (top two tracks), click an area where the waveform flattens (picture the waveform as a sausage and look for the tie-off point). In the zoomed-in tracks, click the flat portion of the wave, and click Play to hear whether you indeed landed between two songs. If not, keep looking. If so, click the left track's gray bar anywhere within the break. From the Insert menu, select Marker. Seek out all other breaks and mark these as well. Then select Split By Markers from the Edit menu. In the resulting dialog, choose where you want your individual songs saved, and click OK. Rename these files by song title and remove unwanted audio before and after each song as you did in step 1.

Isolate songs from a collective recording by first marking the break points, and then splitting the clip at each marker.






**3 Clean Out Clicks** If you recorded from vinyl, your recording probably has a few clicks and pops in it. To get rid of these sounds, open a song in Sound Studio, click Play to listen, and click Stop when you hear a click or pop. The noise should appear as a spike in the waveform. To get rid of it, click the left track's gray bar just before the spike starts and drag to the point where it ends. Then select Interpolate (Repair) from the Filter menu to knock it out. To review your handiwork, click the wave before the repaired area, and then click Play. Repeat for all other pops and clicks.



Our cursor in the before shot points to a click; once we interpolate it, the noise disappears (after).

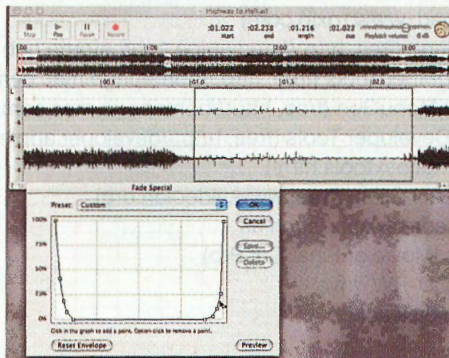
**5 Lower Noise** It's almost impossible to remove continuous crackles and hiss without sacrificing sound quality (unless you're a pro with a pro app). Expect to live with a bit of residual noise if you want your song to sound good. To diminish noise presence a bit, though, click the left track's gray bar anywhere and press Command-A to select all. From the Filter menu, select Graphic EQ, then 30-Band EQ to open the filter. Click Preview to start playing the song, and then experiment by selecting a high-frequency slider and notching it down to hear if it lessens the noise. Listen and experiment. Most hisses and crackles peak in the 10KHz to 12KHz range—start here, but listen carefully to sound quality, too. When you find a happy medium, click OK.

 Kris Fong is sorry to report that no amount of EQ will silence a hissing cat.

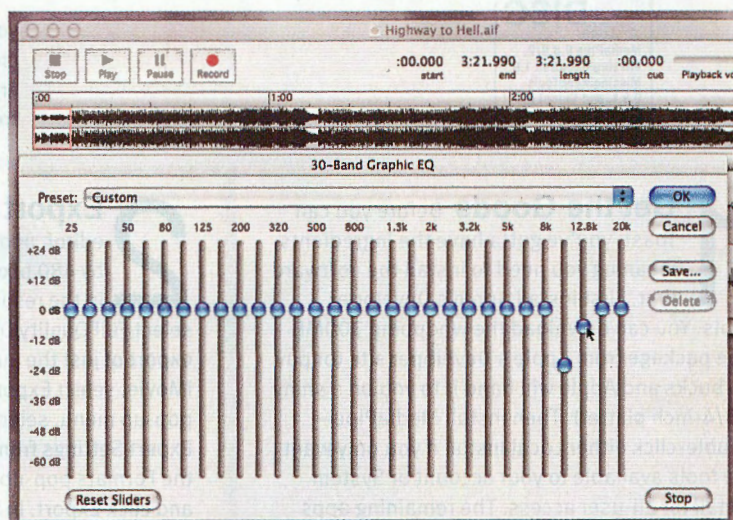
## PREAMP PROBLEMS

If you're recording from a turntable-and-preamp combo instead of a turntable and stereo receiver, your music may sound like it was recorded in a tin can. This is because vinyl is recorded with reduced lower frequencies and boosted higher frequencies, known as the RIAA curve. This technology was an industry-standard way of getting better sound from and fitting more recording time on a record, while keeping the needle from jumping off it during play. Stereo receivers boost these frequencies back

**4 Remove Crackle and Hiss from Silent Passages** Removing noise that plays throughout a clip is difficult. Pro packages like Peak, along with expert audio-engineering skills, can yield good results, but there are quick-and-dirty methods. To get rid of crackling and hiss in a silent part of a song, highlight the affected area, and then select Fade Special from the Filter menu. In the resulting dialog, click Preview to hear the passage. Then click in the grid to draw a U shape so that the sound volume fades quickly at the start of the affected area, remains silent through it, and quickly returns to normal volume at the end. Click OK, click the waveform before the repaired spot, and click Play to review your work.



This area between guitar riffs should be silent, but it's not. Using the Fade Special filter, we dropped the volume on this spot.



We got rid of the severe crackle in our song by taking these two frequency sliders down a notch.

to normal levels when you play a record, but preamps won't. However, you can reintroduce and rebalance the frequencies in your digitized music by altering the EQ settings in your audio app.

One other turntable trouble spot: If you hear a low-frequency hum when you try to preview a record, you're hearing ground hum. This is caused when a preamp amplifies sound from an ungrounded device, such as your turntable. To get rid of it, just take your turntable's grounding wire and wrap it around the bottom prong of a three-prong plug (like the one on your power strip), and plug it into a grounded outlet.



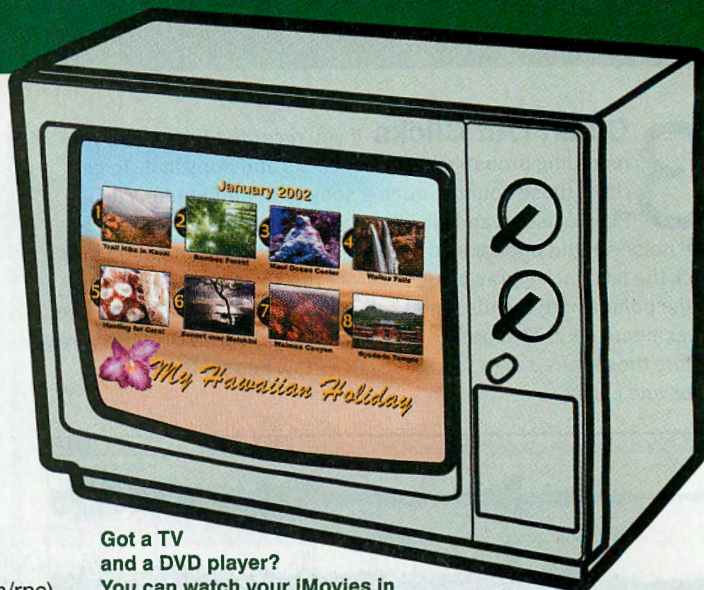
# Create a Super Video CD

by Andrew Tokuda

TRICKY

## WHAT YOU NEED

- Mac OS 10.2 or later (\$129, [www.apple.com](http://www.apple.com))
- Roxio Toast 5.1.2 or later (\$99.95 boxed or \$89.95 download, [www.roxio.com](http://www.roxio.com))
- MediaPipe (free, <http://mediapipe.sourceforge.net>)
- MissingMpegTools (free, <http://homepage.mac.com/rnc>)
- MissingMenuGen (free, <http://homepage.mac.com/rnc>)
- Apple Developer Tools (free, <http://developer.apple.com/tools/macosxtools.html>)
- VideoLAN Client (free, [www.videolan.org](http://www.videolan.org))
- Video-editing app (such as Apple's iMovie or Final Cut Pro)
- CD-R/CD-RW drive
- Mondo disk space



**Got a TV and a DVD player? You can watch your iMovies in near-DVD quality from a mere CD-R disc if you create an SVCD.**

We showed you in our April issue how to create a Video CD (or VCD) that allows you to play movies—housed on a CD—in most set-top DVD players. If you don't have a DVD burner, VCDs are a relatively cheap and convenient way of sharing your digital movies with those who don't have a computer—and a narcissistic way of fawning over yourself on TV. The downer is that you have to deal with a VCD's VHS-like quality. Or do you?

If you're willing to put a little extra muscle into your efforts, you can get near-DVD-quality video on a regular CD-R by creating a Super Video CD. It won't cost you a penny more than creating a regular VCD, since most of the required software is free and you likely have the rest. Here's how to make one.

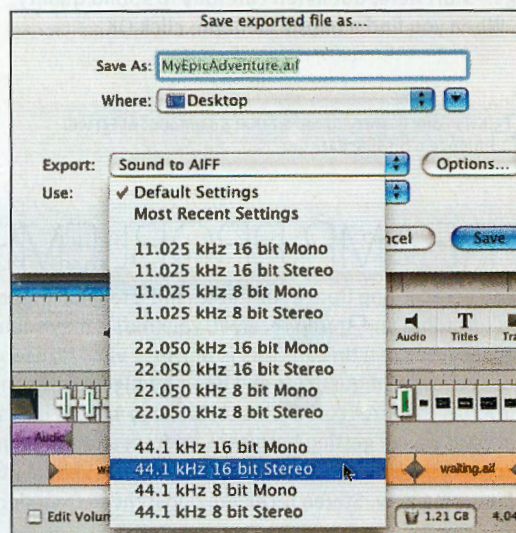
**1 Get the Goods** Before you can Toast, you've gotta have the ingredients, meaning you need to install the software first. First install Apple's Developer Tools. You can download the whopping 300MB free package from Apple's Developer site (or pay 20 bucks and Apple will hand it to you on a shiny 4 3/4-inch platter). Then install MediaPipe—double-click either Local Install if you only want the tools available to your account or System Install for all-user access. The remaining apps don't require installation.



MediaPipe offers two installers; choose Local for sole tool access or System for all-user access.

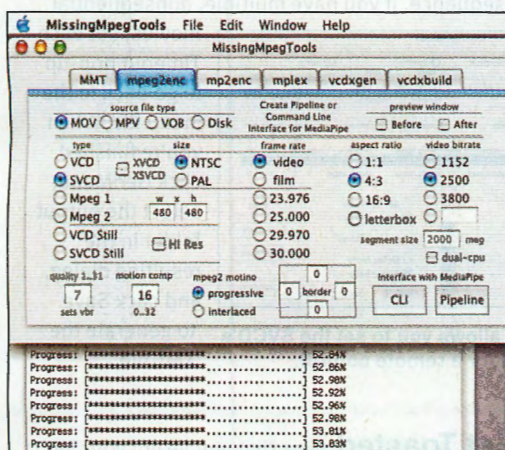
**2 Export Video and Audio** Open the movie in your video editor, and export it (or its first chapter) in high-quality DV format at 720 by 480 pixels. To do this in iMovie, select Export from the File menu. In the resulting dialog, choose To QuickTime from the Export pop-up, select Full Quality DV from the Formats pop-up, and click Export. Do a second export of just the audio track, saving it as a 16-bit, 44.1kHz stereo AIFF file. In iMovie, select Export from the File menu, select To QuickTime from the Export pop-up menu, select Expert Settings from the Formats pop-up, and click Export. In the resulting dialog, choose Sound To AIFF from the Export pop-up, select 44.1kHz 16-bit Stereo from the Use pop-up, and click Save.

If you're using iMovie, export just the audio tracks by selecting Sound To AIFF from the Export pop-up in Expert Settings.





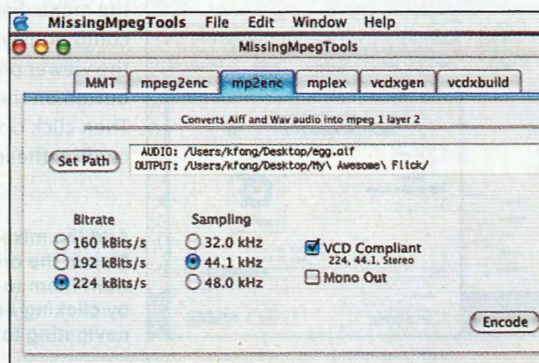
**3 Encode Video to MPEG-2** Launch MissingMpegTools and click the Mpeg2enc tab. In the panel, click the MOV radio button, and in the resulting dialog, select your exported DV movie, and then click Choose. Another dialog pops up, asking you to select an output folder. Select a folder or create a new one to store your encoded files, and then click Choose. Leave the default settings unless your movie is wide-screen format (if so, select the 16:9 radio button) or you live in Europe (select the PAL radio button). If you have a dual-processor Mac, check the Dual-CPU box to speed things up. Then click CLI; the Terminal launches and



gobs of gibberish run across the window during the encoding process. This can take a looong time. Be patient. This might be a good time for lunch. Once you see the message "done!" followed by the Terminal prompt, it's finished.

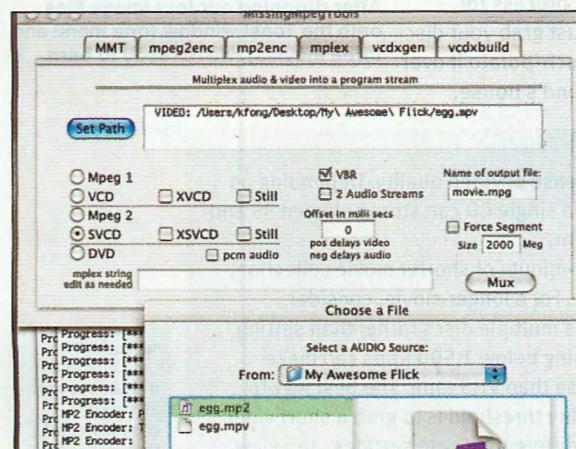
20 minutes later, the Terminal shows that our video encoding is only a little more than halfway done—and this is a 3-minute clip!

**4 Encode Audio to MP2** Next, convert your AIFF file into an MPEG-1 Layer 2 (MP2) file. Click the Mp3enc tab, click Set Path, select your exported AIFF in the resulting dialog, and click Choose. In the subsequent dialog, select the same output folder you used for your video, and click Choose. Leave the default settings, but make sure the VCD Compliant box is checked. Then click Encode to start the Terminal process for the audio section.



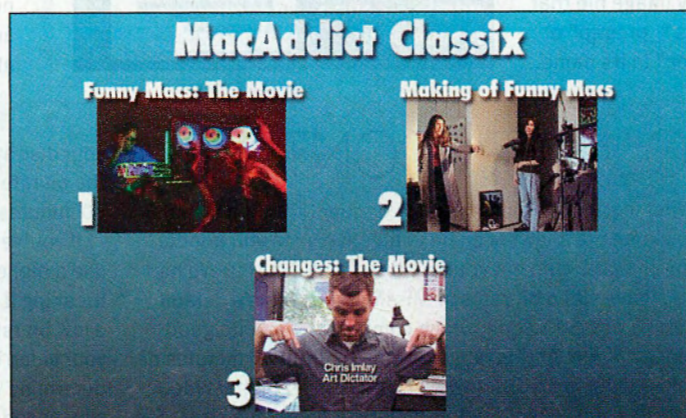
Encoding AIFF audio to MP2 is a process similar to encoding video—and just as boring to watch.

**5 Mux the Media** You now have an MPEG-encoded video (MPV) and audio (MP2) file that you need to merge. This process is called *multiplexing*, or *muxing*. Click the Mplex tab, then click Set Path. In the resulting dialog, select the MPV file and click Choose. In the subsequent dialog, select the MP2 file and click Choose. In the next dialog, click Choose to select your current output folder. In the Name Of Output File field, name your movie, keeping the .mpg extension; leave the default settings. Then click the Mux button to fuse the files. If you have more videos, encode and mux each of them in sequential order. Keep in mind that an SVCD holds about 45 minutes of average-quality video (see "Quality Control," p66). To preview your muxed video, play the MPEG file in VideoLAN Client.



The multiplex section launches a series of dialogs where you choose a video and an audio file for fusion.

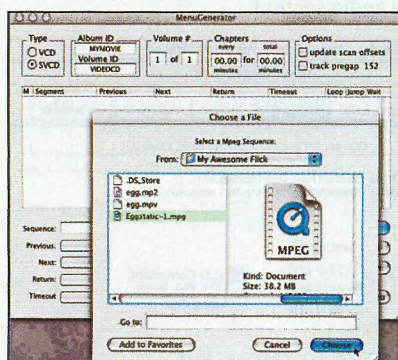
**6 Make the Menu** If you've got multiple videos, a menu is key for navigation. Because the user will navigate SVCD movie sequences via the numbers on a DVD player's remote control, add a numeric reference to each movie thumbnail in your menu. For menu-creation instructions, see "Create a Static SVCD Menu," p67. Your graphic should include numbered and titled thumbnails to represent each movie clip. Save the file as a TIFF or JPEG, import it into your video editor, and export the file as a two-frame DV-format movie. Launch MissingMpegTools, click the Mpeg2enc tab, and click the SVCD Still radio button. Click the MOV radio button, choose your menu movie file and output folder in the dialogs, and click CLI to encode the file. Click the Mplex tab, check the Still box in the Mpeg 2 section, click Set Path, and select the menu MPV and output folder in the dialogs. Name your menu file in the Name Of Output File field, and click Mux to create the MPEG.



We created this menu graphic, which displays numbered thumbnails of our videos, and then encoded it for SVCD compatibility.



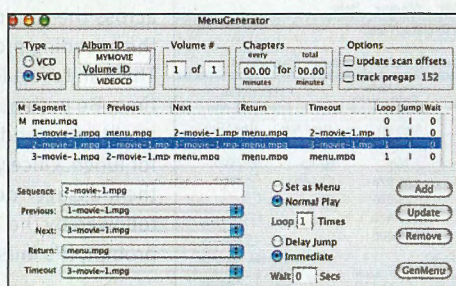
**7 Order the Items** Although MissingMpegTools can generate XML files—the SVCD building block—MissingMenuGen offers better navigation. Launch MissingMenuGen and click Add. In the resulting dialog, select your menu MPEG file and click Choose. Click Add again, select the movie MPEG file that should play first in your sequence, and click Choose. Continue adding movie MPEGs in the order you want them to appear on your SVCD. When you're finished, click the first entry in the window (your menu), and select the Set As Menu radio button. Set the Loop field to 0 (zero)



Times, which makes the menu display continuously until the viewer presses a button on the remote. Then click Update to confirm these settings.

**Add the mixed MPEG files in the order you want them to appear by clicking Add, then navigating to each file.**

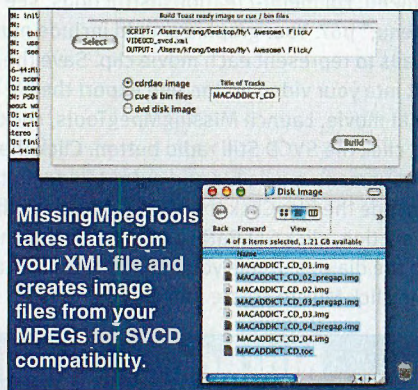
**8 Map Out the Navigation** Select the first movie file in the list. At the bottom of the window, use the Previous, Next, and Return pop-up menus to assign which movie file to play when the viewer presses the previous, next, and return buttons on a remote control. For example, assign the Next pop-up to play the next movie in the sequence. Use the Timeout pop-up to assign which movie to play automatically when the current one ends. Click Update after setting a movie's navigation but before selecting the next. Repeat for remaining files. If your movie is divided into chapters, set each Timeout pop-up to play the next movie in the sequence. If you have multiple, nonsequential



**MissingMenuGen allows you to set the SVCD's navigation control for a remote control.**

movies, set each Timeout pop-up to go back to the menu file. When you're finished, click GenMenu, select the output folder in the resulting dialog, and click Save to generate the XML file.

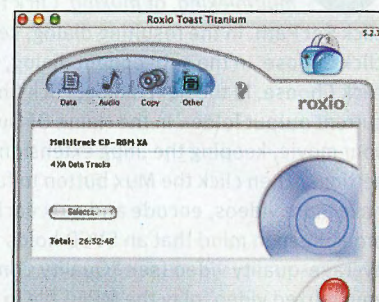
**9 Build the SVCD** To make menu and movie files viewable on an SVCD, you need to turn your work into image files. Launch MissingMpegTools and click the Vcdxbuild tab. Select the Cdrdao Image radio button, then click Select. In the resulting dialog, select the XML file and click Choose. In the subsequent dialog, select the output folder and click Choose. Name your collection in the Title Of Tracks field and click Build. The Terminal once again displays the process as your menu and movies get converted into image files (with the extension .img). When it's finished, open your output folder and delete any image file that has "\_pregap" or ".toc" in its name.



**MissingMpegTools takes data from your XML file and creates image files from your MPEGs for SVCD compatibility.**

**10 Get Toasted** Now that you've got your SVCD in virtual format, it's time to burn it for posterity. Launch Toast; in the window, click Other and select Multitrack CD-ROM XA from the drop-down menu.

From your output folder, drag all the image files into the Toast window in order. Then click Record to burn your disc. When Toast chimes to tell you it's done, fire up your TV and DVD player, stick the disc in, pop some corn, sink into your La-Z-Boy, and enjoy the show. Most newer DVD players can play SVCDs, but some older ones may not. If you can't play your creation, don't rant and rave about going through this entire process for nothing. Just grab your disc and go couch-potato it over at your friend's house.



**After dropping our four image files onto the Toast window (one menu and three movies), we're ready to burn.**

## QUALITY CONTROL

What matters to you more, size or quality? When it comes to video, the answer can be subjective once you ponder the choices—and get your mind out of the gutter. We had you leave video bit rates at MissingMpegTools's default setting of 2,500 Kbps, which compresses DV into good-quality video. At this rate, you can fit about 45 minutes of MPEG video on a CD. However, you can set higher video bit rates, which yield better quality at bigger file sizes. Set a lower bit rate, and you can cram more movie minutes on

your disc at the expense of video quality. Depending on the bit rate you set, a single CD can store between 35 and 70 minutes of content.

If you've got a 30-minute or shorter movie collection, use a higher bit rate. For a longer movie, consider breaking it up across multiple discs rather than setting a low bit rate; anything below 1,500 Kbps can make your video look worse than VHS tape. The best way to determine your quality threshold is to grab a short video clip, encode it with different bit-rate settings, and view them all.

 Andrew Tokuda is a video producer at 3rd Light Digital Media—that means he gets to play with really cool toys.



# Create a Static SVCD Menu

by Kris Fong



## WHAT YOU NEED

- Any image editor
- Any video editor

You've spent a good amount of time shooting your video and editing it, so what's one more task? Sure, you can stick all your movies onto an SVCD without a menu; the movies will play in sequential order. But if you want to give viewers the choice of skipping to the good parts in your indie movie, or choosing which movie to view from your grab bag of clips, a menu is in order. Here's how to create a still image menu. We used Photoshop, but you can apply our instructions to your own image editor.

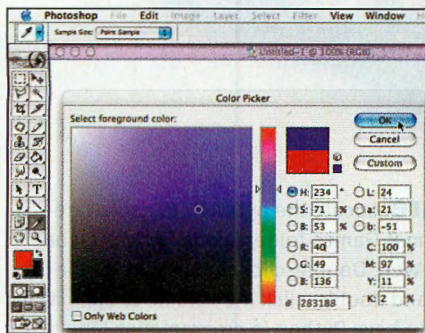


GraphicConverter 4.6 and Montage 1.1 demo



Wanna help viewers navigate through your SVCD when they play it in their DVD player? Create a menu.

**1 Create the Backdrop** Your videos are 720 by 480 pixels. Your menu should be likewise—unless you edit video in iMovie, in which case create a new document 720 pixels wide by 540 pixels high. If you edit video in a higher-end editor (meaning anything but iMovie), create a new 720-by-480-pixel document. Then give your menu a background color; click the foreground color swatch in the tool palette, choose a color, select the paint bucket tool, and click the canvas. Alternatively, you can paste in any image to serve as a menu background, as we did.



To create a solid menu background, choose any color from the Color Picker.

**2 Add a Title** Let your viewers know what they're watching by giving your SVCD a title. Select the text tool, choose a font and size from the respective pop-up menus in the tool options palette, and then select a text color (one that stands out from your background) from the color swatch. Click inside the canvas and type a title. Use the move tool to place it. If you want to change your font and/or size choice, select the text tool, highlight the text on the canvas, and choose different options from the pop-up menus.



If you don't like the font or size you started with, just highlight your title and experiment with choices afterwards.

**3 Throw in Thumbnails** To create thumbnail images, take a screenshot (Shift-Command-3) of one of your movies. Open the shot in your image editor and crop around the movie image. Repeat for other clips. If you've got lots of movies, size down each thumbnail accordingly so everything will fit in the menu. To add a thumbnail, open the image, copy it, and paste it in the menu graphic. To resize a thumbnail, choose its layer in the Layers palette and from the Edit menu, select Transform, then Scale. Hold down the Shift key and drag any bounding-box corner to resize. Double-click inside the box to set the change.



Depending on the number of movie sequences you have, scale your thumbnails to fit them all.

**4 Add Numbers and Text** Use the text tool to add a number and title to each movie thumbnail. Remember which number you give each movie, as this number will dictate the order in which you encode and build your SVCD. When you're finished, flatten all layers, save the file as a JPEG or TIFF image, import the file into your video editor, and create two frames (iMovie users should drag the clip to the timeline, press the right-arrow key twice, select Split Video Clip At Playhead from the Edit menu, and delete the second clip in the timeline). Then export the file as a High Quality DV movie.



Because SVCDs require viewers to punch numbers on their remotes to jump around sequences, do them a favor and supply the reference.



Kris Fong is an editor at MacAddict magazine—that means she gets to play(giarize) really cool, uh, words.



# Play Dance Dance Revolution on a Mac

by Chris Barylick

EASY

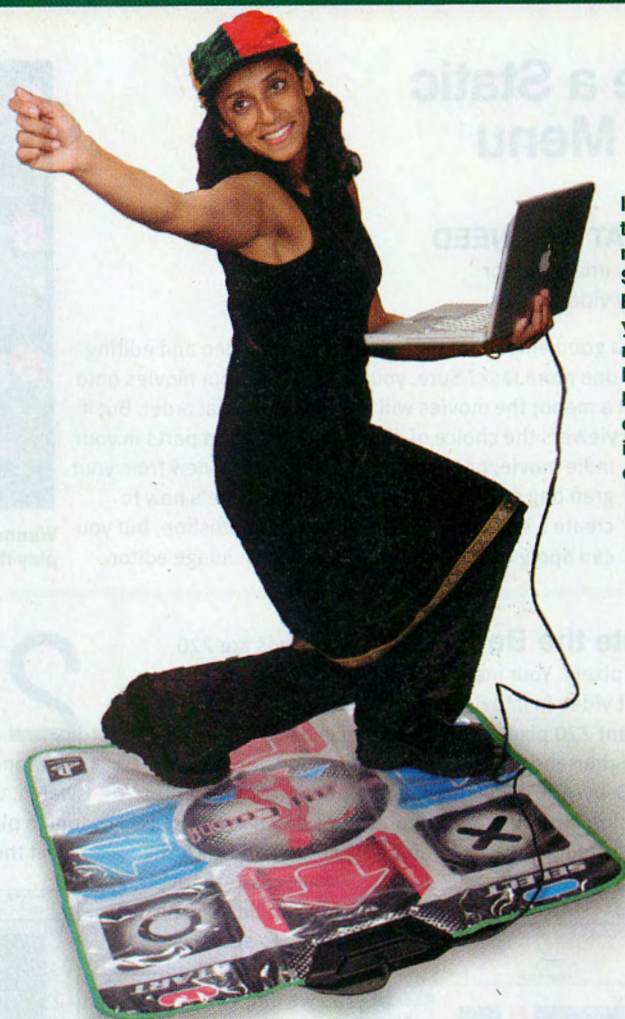
## WHAT YOU NEED

- USB-equipped 400MHz G3 or faster
- Mac OS 10.2 or later
- pyDDR 0.6.2 or later (free, <http://icculus.org/pyddr>)
- Sony PlayStation-compatible dance pads (\$15 to \$25)
- PlayStation-to-USB adapter (about \$15)

This summer, you can dance in front of your Mac and be regarded as completely sane. Dance Dance Revolution is a massively popular interactive dancing game where players engage in some fancy footwork, dictated by the onscreen step arrow sequence, with the goal of outdancing their opponent. The game used to be exclusive to the Sony PlayStation and arcade units, but thanks to some determined programmers, you can now play the game on a Mac—and it's free.

The open-source version—pyDDR—was ported from Linux to the Mac by a team who made sure its game remained true to the original. Players select a song and dance to it, matching the highlighted arrows they see scrolling up the screen with footsteps on the dance pad's corresponding arrows—kind of like Simon-meets-karaoke. The more accurate your steps, the higher your score—if you've got two left feet or no sense of rhythm, it'll cost ya. Dance alone or against another player simultaneously.

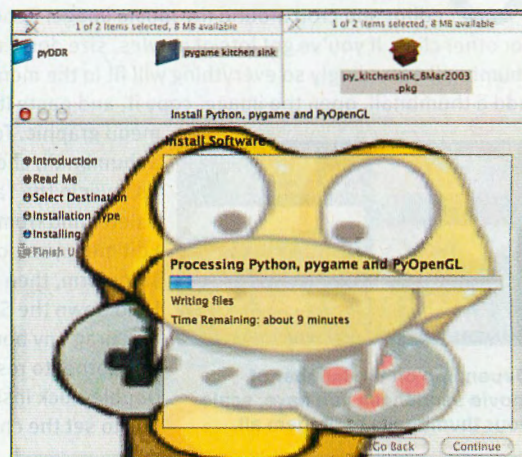
Though you can play the game using your Mac's keyboard, you'll have a heckuva lot more fun if you get a PlayStation-compatible dance pad and a PlayStation-to-USB adapter to play the game for real. So if you aspire to be the next badass beat breaker on the DDR scene but fear showcasing your inexperienced moves in the presence of other mall rats, here's a great way to practice and play in the privacy of your own home.



If your dance technique resembles Seinfeld's Elaine Benes, you can now play Dance Dance Revolution on your Mac in the privacy of your home.

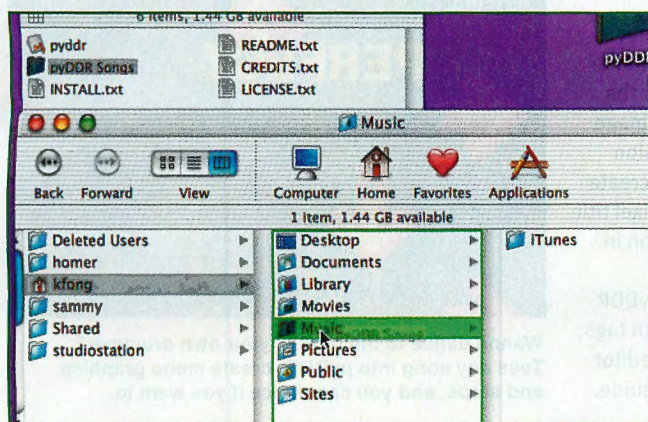
**1 Install the Software** Locate the pyDDR 0.6.2 software on the Disc (find it in the Fun & Games folder inside Software), or download the file from the Web. Double-click the disk image file to mount it on your desktop, and double-click the volume to open it. To run the game on a Mac, you need to have Python (a programming language) and other utilities installed. Luckily, the developers put all the necessary components and the game into one global installer. Just open the Pygame Kitchen Sink folder and double-click the PKG file inside to run the installer (you need to have administrator privileges to install the software).

**Double-click the PKG file to launch the installer, which installs the game and all necessary components onto your Mac.**





**2 Put Stuff Where It Belongs** Once you've installed the game, locate the pyDDR folder at the root of the pyDDR 0.6.2 disk-image volume—this folder holds the game's executable files. Copy the entire folder onto your desktop, and then open it (the hard disk version—not the disk image). Inside, you'll find a folder called pyDDR Songs, which (not surprisingly) contains the song files and data for the game. However, you need to move the folder to your user's Music folder (the same one that holds your iTunes stuff) to run the game properly. Double-click your hard drive icon to open it, and then click the Home icon to display your user folder. Drag the pyDDR Songs folder to your user's Music folder.



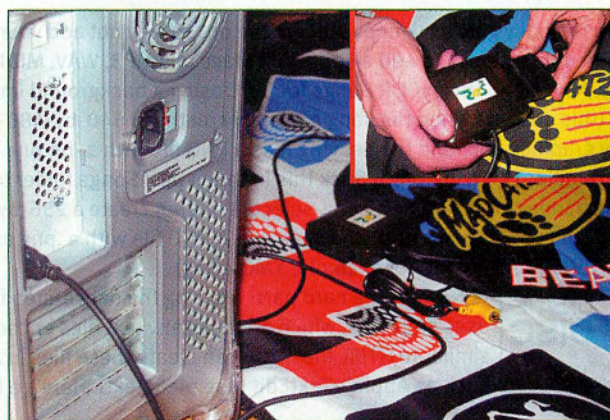
To get songs to play in the game, move the pyDDR Songs folder to your Music folder.

**4 Go Dance** OK, let's dance! Open the pyDDR folder on your desktop and double-click the pyDDR app to launch the game. pyDDR should automatically sense your hardware setup and display a menu screen from which you can choose a song—the game comes with three original songs, but you can add your own music and dance steps (see "Create Your Own Dance Steps," p70). Step onto the dance pad, use its buttons like those of an ordinary controller to navigate the menus and make selections—and dance, dance, dance!



Use the buttons on the dance pad to navigate the game's menus, select a song, and start boogying!

**3 Attach the Pads** While pyDDR is free to all, you need to buy or borrow a set of PlayStation-compatible dance pads and an adapter—unless you'd rather hunt-and-peck your way through the game, which really isn't that fun. (For hardware purchasing information, see "Where to Buy," below.) Attach the USB end of the PlayStation-to-USB adapter to one of your Mac's USB ports (feel free to attach it to a USB hub port or one of your keyboard's USB ports—it won't hinder performance). Then plug the dance pad's connector into the adapter's hub (the square part) and you're done. If you have two pads, an adapter from Level Six allows you to plug both in.



Connecting the pads to your Mac is a simple plug-and-play affair.

## WHERE TO BUY

If you're looking to do more than finger-dance atop your Mac keyboard, you need a PlayStation-compatible dance pad (or a pair for two-player challenges) and a PlayStation-to-USB adapter. You'll find dance pads in just about any store that stocks video games, including Best Buy, CompUSA, Fry's, Electronics Boutique, Wal-Mart, and Target, as well as online. Depending on the manufacturer and design, prepare to pay between \$15 and \$25 per pad.

A PlayStation-to-USB adapter may be more difficult to find. Although you can find one at Radio Shack, the pyDDR developers strongly recommend that you order one from Level Six (\$14.95, [www.levelsix.com/products/pc/EMSUSB2.shtml](http://www.levelsix.com/products/pc/EMSUSB2.shtml))—it allows you to connect two dance pads simultaneously, and it doesn't require any additional futzing.



This adapter lets you connect any PlayStation control device to your Mac via USB.



Here's what a basic dance pad looks like.



# Create Your Own Dance Steps



## WHAT YOU NEED

- Mac OS 10.2 or later (\$129, [www.apple.com](http://www.apple.com))
- pyDDR 0.6.2 or later (free, <http://icculus.org/pyddr>)
- Text editor, such as TextEdit (built into Mac OS X)
- Graphics app, such as Adobe Photoshop (\$609, [www.adobe.com](http://www.adobe.com)) or Lemke Software's GraphicConverter (\$30, [www.lemkesoft.com](http://www.lemkesoft.com))

You're finally getting your pyDDR groove on, so why not add your own music and dance steps? To add a song, just place any MP3, WAV, MIDI, or OGG file (sorry, no AAC) in the pyDDR Songs folder. Design a background image for the song (this appears when the song plays) by creating a 640-by-480-pixel image in any graphics app, and then saving it as a PNG file with a `-bg.png` extension (for example, `YMCA-bg.png`). Stick this in the pyDDR Songs folder too. To create a song banner for the game's song-selection menu, create a 256-by-80-pixel title graphic in your graphics app, and save it as a PNG file with a `.png` extension in the pyDDR Songs folder (for example, `YMCA.png`).

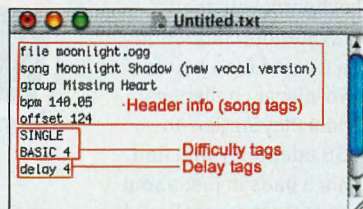


Now for the hard part: creating the dance-step files. pyDDR uses step files, which are basically text files encoded with tags, similar to HTML files. You can create these files in a text editor such as Apple's TextEdit (use plain text). Here's a basic guide.



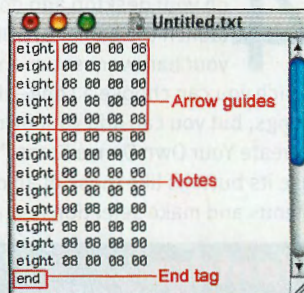
**Wanna dance to the beat of your own drummer? Toss any song into pyDDR, create menu graphics and steps, and you can dance if you want to.**

**1 Define the Song Characteristics** Create a new plain-text document and type *file* followed by the song's exact file name and extension in the first line (for example, *file YMCA.mp3*). In the next line, type *song*, then the song title. In the next line, type *group*, then the artist's name. The next line tells pyDDR how fast the song plays in beats per minute (bpm). Type *bpm* followed by a number (to figure out a song's bpm, try using a metronome or executing pyDDR's *findbpm* file via the Terminal). Offset makes up for any silent delay (in milliseconds) that may occur between the file's start and when the song actually kicks in—type *offset* and a value (for example, typing *offset 500* compensates for a half-second delay). Type the gameplay mode—*SINGLE* or *DOUBLE*—on the next line. On the line after that, you'll set the difficulty level and how fast the arrows scroll upward. Type *BASIC*, *TRICK*, or *MANIAC*, and add a number to complete the tag. On the next line, type *delay*, followed by the number of seconds to wait before playing the song file.



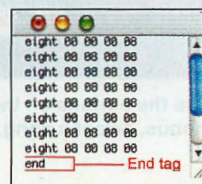
**Start the step file by writing the song and timing tag info first. Thankfully, writing step code is pretty simple.**

**2 Create the Steps** Next, define where a player needs to step. Each command starts with a note that determines the timing, followed by an arrow guide tag—a numerical code that determines which arrow appears. Assign notes with these commands: *whole* (creates a whole note, or a beat with three beats of silence), *halfn* (creates a half note, or two beats), *qrtr* (creates a quarter note, or one beat), *eight* (creates an eighth note, or half a beat), or *steps* (creates a sixteenth note, or a quarter of a beat). Assign arrows with these codes: left arrow—08 00 00 00, down arrow—00 08 00 00, up arrow—00 00 08 00, or right arrow—00 00 00 08. You can also make a player step on two arrows at once. For example, typing *qrtr 08 00 00 08* challenges the player to hit both the left and right arrows simultaneously on one beat. There's no set way to write steps—take a good listen to your song and be aware of the beat, time changes, and mood of the piece.



**To create a step, type a note to define the timing then type an arrow tag to dictate which arrow to assign to the step.**

**3 Test Out Your Steps** To finish off the instructions, type *end* on a new line after completing the last step-file command, save the file with the song name and a `.step` extension (`YMCA.step`, for instance), and drop it in the pyDDR Songs folder. Then launch pyDDR and put your feet to the test. If you find that some of your steps are off rhythmically, you may need to edit your step file until everything grooves to that funky beat and your steps run through to the end of the song.



**To finish, type *end*.**

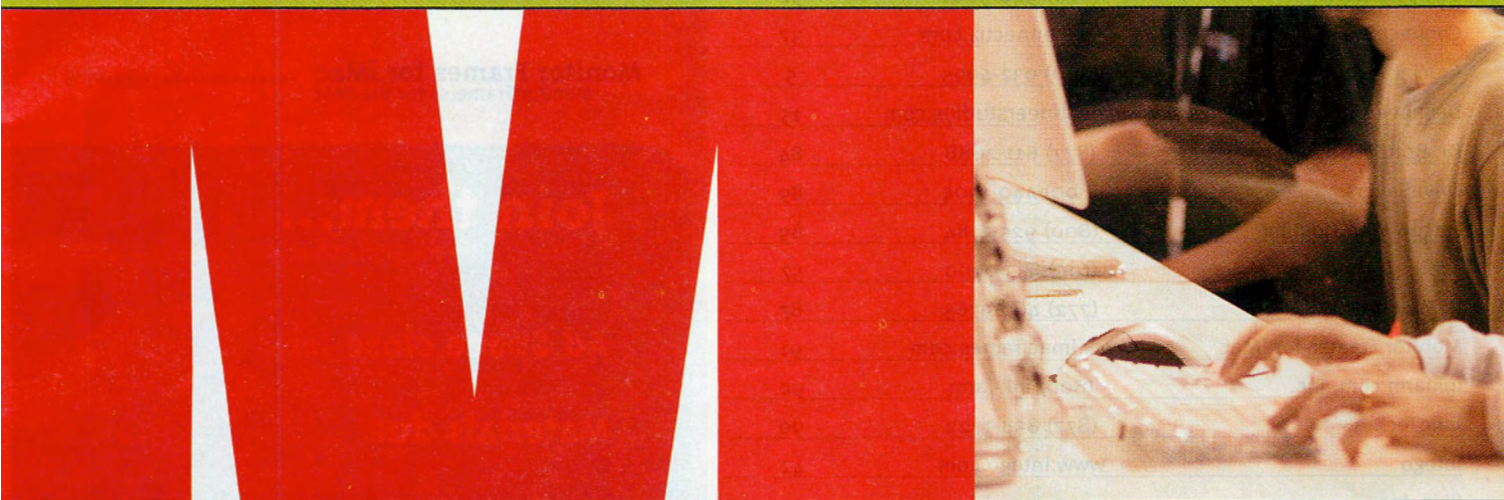


# Macworld

## CreativePro

### Conference & Expo™

Register online with Priority Code: **A-MAJ**



# July 14–18

**New York The Javits Center**

**Conferences July 14–18, 2003**

**Expo July 16–18, 2003**

**[www.macworldexpo.com](http://www.macworldexpo.com)**

Macworld CreativePro Conference & Expo™ is a unique series of conferences, focused on technology for the creative arts, including design and publishing, video and music.

Designed for creative professionals and prosumers — everyone who wants to immerse themselves in the creative arts — it's the answer to the creative community's demand for new insights.

**Innovate. Motivate. Create!**

IDG  
WORLD EXPO

Flagship Sponsors

**Macworld**

**Macworld.com**



**MacCentral**

Platinum Sponsor

**HIGH-END  
COMMUNICATIONS**

Gold Sponsor

**Printing  
ForLess.com**  
YOUR ONLINE SOURCE FOR QUALITY PRINTING

Media Sponsor

**creativepro  
com**



# Advertiser Index

Advertiser	Contact	Page
Academic Superstore LLC	(800) 294-4035	91
ackNOWLEDGE	www.iskinprotect.com	89
Acmemade	www.acmemade.com	93
Applelinks	www.ThinkDifferentStore.com	93
Aspyr Media	(512) 708-8100	2, 9, 38
Batista.org	www.batista.org	90
Broadway Photo	(800) 951-9542	85
Canto Software	www.canto.com	92
Coast to Coast Memory	(800) 4-Memory	90
CompuExpert	(888) 948-9661	92
Connectix	www.connectix.com	37
Crucial Technology	(800) 932-4995	5
Destineer Studios	www.destineerstudios.com	15
Dr. Bott, LLC	(877) 611-2688	84
DriveSavers	(800) 440-1904	89
Fatcow Web Hosting	(800) 925-2184	89
Griffin Technology	(615) 255-0990	57
IK Multimedia	(772) 466-9763	87
Monitor Frames for iMac	www.imacframes.com	91
Inkfarm.com, Inc.	(800) ink-farm	90
InnoTech	(877) 858-7722	90
Intego	www.intego.com	42
Jliva, Inc.	www.superscrubber.com	51
Leister Productions	(717) 697-1378	90
Lind Electronics, Inc.	(800) 897-8994	93
Mac Connection	www.macconnection.com	74-75
Mac Solutions	(800) 873-3RAM	86, 92
Mac-Pro Systems	(800) 525-3888	93
MacMall	(800) 965-3282	76-77
MacofAllTrades	(800) 304-4639	93
MacWarehouse	(800) 981-9192	C2-pg 1
MacZone	(800) 304-0286	82-83
Marathon Computer, Inc.	(800) 832-6326	93
Mark/Space	www.markspace.com	91
MarWare, Inc.	(954) 927-6031	91
MegaMacs	(918) 664-MEGA	89
MicroMat Computer Services	(800) 829-6227	C3
Microsoft Network	www.join.msn.com/mac	C4
Netalog	(919) 382-3227	88
Other World Computing	(800) 275-4576	78-81
Pacific Software Publishing	(800) 232-3989 x2	53
Power Max	(800) 613-2072	73
PowerOn Computer Services	(800) 673-6227	88, 92
RAMJET, Inc.	(800) 355-4569	90
REAL Software	(512) 263-1233	7
SoWhatSoftware	(800) 307-0663	93

# MacAddict

## Welcomes...

These new Mac Addict Advertisers.

**Mac Connection** .....Pg.74,75  
Providing Macintosh Products Since 1984

**IK Multimedia** .....Pg.87  
Turn your Mac into a Huge Collection of Guitar Amps.

**Monitor Frames for iMac** .....Pg.87  
Monitor Frame(s) for the iMac

## Join them...

in the September 2003 issue of *MacAddict*

**Ad Space close** .....July 1

**Materials due** .....July 8

**On-sale date** .....August 19

## Did you know?

- **74%** of our readers own Games/Entertainment Software
- **43%** plan to purchase Games/Entertainment Software
- **90%** own game consoles
- **34%** plan to purchase game consoles
- **44%** play Strategy games
- **42%** play arcade games
- **42%** play action adventure games

Contact your Ad Manager today!

**Ana Epstein**

Direct Sales-Ad Mgr

(415) 656-8416

ana@macaddict.com



# Call the Mac Experts!

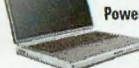
## REFURBISHED COMPUTERS



There's virtually no difference between these refurbished machines and the brand-new ones. Each refurbished computer comes with Apple's full-year warranty!

iMac® G3/500 CRT, 64 MB RAM, 20 Gb HD, CD, Indigo	\$588
iMac® G3/600 CRT, 256 MB RAM, 40 Gb HD, CD, Snow	\$648
iMac® G3/600 CRT, 256 MB RAM, 40 Gb HD, CD-RW, Snow	\$788
iMac® G4/800 LCD, 256 MB RAM, 60 Gb HD, SuperDrive, 56K	\$1248
iMac® G4/1-GHz LCD, 256 MB RAM, 80 Gb HD, SuperDrive, 56K modem, 17" screen	\$1588

Since Our Refurbs are so Popular, Our Inventory Changes Constantly. Click or Call for Our Latest Selection!



PowerBook® G4/800, 512 RAM, 40 Gb, ComboDrive, AirPort	\$1888
PowerBook® G4/867, 256 RAM, 40 Gb, ComboDrive	\$1988
PowerBook® G4/1-GHz, 512 RAM, 60 Gb, SuperDr	\$2449
iBook G3/700, 128MB RAM, 20 Gb HD, ComboDrive, 12.1" screen	\$999
iBook G3/800, 128MB RAM, 30 Gb HD, ComboDrive, 12.1" screen	\$1088
iBook G3/900, 256MB RAM, 30 Gb HD, ComboDrive, 14.1" Screen	\$1188

Receive a free Kryptonite® security cable with every new or refurb laptop!

## DISPLAYS & PRINTERS

**LACIE** We've Got The New Lacie Electron Blue IV CRT Monitors. Stellar Color, Clarity and Quality. 2048x1536 Maximum Resolution.



Epson C60 Bundle - Includes USB Cable, Print Master Software, Epson Ink Pen, Free black Ink Cartridge Certificate! Only \$69

## USED COMPUTERS

PowerCenter 604/150 MHz 32MB RAM, 2Gb HD	\$59
Tower 7200 MHz 120MB RAM, 1.2Gb, CD	\$105
Beige G3/233 MHz 64MB RAM, 6Gb HD, CD	\$322
Beige G3/266 MHz 320MB RAM, 4 Gb HD	\$418
Tower G3/350 MHz 256MB RAM, 12 Gb HD, CD	\$469
Tower G3/400 MHz 128MB RAM, 9Gb, CD	\$489
Pwr. Book G3/233 MHz 160MB RAM, 6Gb HD, DVD	\$698
Tower G4/500 MHz 256MB RAM, 18Gb HD	\$1069
iBook G3/500 MHz 384MB RAM, 20Gb, Combo	\$1199

## CAMERAS AND SOFTWARE

Get a **FREE** Case Logic Photo-Video Bag With Any New Digital Camera!



**POWER MAX**

Order Online or Call One of Our Mac Experts!

[WWW.POWERMAX.COM](http://WWW.POWERMAX.COM)

Daily specials & blowouts • Bargain Basement Deals • New, used & refurb lists  
Digital video packages • Important National Macintosh News Updated Daily!

**800-441-6977**

Knowledge is Power

Personal Financing • Fast P.O. Approvals • Business Leasing • Weekly specials on our web site

Are You A Member Of A User Group?

[www.applemugstore.com](http://www.applemugstore.com)

PowerMax is a division of Computer Stores NW, Corvallis, OR.

Macintosh User Group members enjoy access to a very special Apple-sponsored web site featuring super deals on the latest Apple products and more! If you are currently not a member of an Apple User Group and would like access to the MUG Store special offers, discounts, and resources, contact an Apple User Group near you to sign up.



Units are factory refurbished with a one year Apple warranty. Buy AppleCare and get a three year warranty and much more!

PowerMac® G4/1-GHz, 256MB RAM, 60 Gb HD, ComboDrive, 56K modem	\$1349
PowerMac® G4/933 MHz, 256MB RAM, 60 Gb HD, SuperDrive	\$1699
PowerMac® G4/Dual 1.42-GHz, "Mirrored Door" 512MB RAM, 120 Gb HD, SuperDrive	\$1849
eMac® G4/700, 128MB RAM, 40 Gb HD, CD	\$669
eMac® G4/700, 128MB RAM, 40 Gb HD, Combo Drive	\$829



Refurbished 17" Apple® LCD Display Just \$588!

You'll be hard-pressed to find a better deal than this on a genuine Apple® LCD display! Be sure to ask us about the complete line of Apple® displays, including the new 20" Cinema Display!

Special deals on AppleCare - exclusively at PowerMax!

Ask us about: A new PowerBook for \$489/mo! Call for details.

## SUPER SPECIALS!

Buy a New G4 Power Mac and Receive:

- The 512 MB RAM "no stinkin' rebate" Deal!
- FREE MYOB First Edge Software
- Free Canon Printer (after mfr rebate)
- FREE Pro Sound 2000 Speakers

The New iPod Is Here!

Thinner, Lighter and Faster Than Ever!

Get up to \$175 trade-in credit for your old iPod!

Refurbished xServes On Sale!

G4/1-GHz 256MB RAM, 60GB HD	\$1988
G4/1-GHz Dual 512MB RAM, 60GB HD	\$2788

Used Blue & White Apple Displays Now Only \$99!

## Huge Allotment of New Custom-Configured PowerBooks in Stock!

PowerBook® G4/667, 512 RAM, 40 Gb, ComboDrive, Airport Card	\$1965
PowerBook® G4/667, 512 RAM, 60 Gb, ComboDrive	\$1999
PowerBook® G4/800, 512 RAM, 30 Gb, ComboDrive, Airport Card	\$2079

And Many More!



**WE TAKE TRADE-INS!**

Looking to trade-in your old Mac? We'll take your Mac OS computer in trade toward the purchase of new product. Call one of our expert Mac consultants for full details.



Free Ram with Select iMac Purchases! Call for the latest pricing!

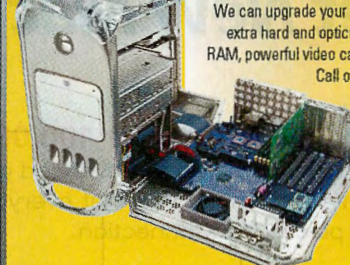


Get TONS of Free Stuff When You Buy A New G4 Power Mac!



Free RAM, Free Carry Case & Free Kryptonite® Lock With Any New iBook!

SAVE \$500 on Macromedia software! Call for details!



**Custom Macs, Built To Order!**

We can upgrade your new Mac with extra hard and optical drives, more RAM, powerful video cards and more. Call our experts and find out how!

GET THE MAC YOU'VE ALWAYS WANTED!



This amazing, hand-held microscope captures images on your computer screen at 10X, 50X, 100X, even 200X magnification! A great tool for industrial, law enforcement and educational purposes!

DIGITAL USB MICROSCOPE

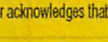
Only \$199! (Mac or PC)

## STORAGE SOLUTIONS

LACIE D2 line; Larger & Faster Than Ever! Drives Now Available in FireWire 800!	120GB 7200 RPM FireWire D2 Hard Drive	\$239
	200GB 7200 RPM FireWire D2 Hard Drive	\$349
	400GB 7200 RPM FireWire 800 Big Disc Hard Drive	\$799
	DVD-RW D2 FireWire w/ Mac Authoring Software	\$359

We Carry a Huge Selection Of Hard Drives, CD-Burners and Removable Media from All Major Manufacturers!

Local: (503) 624-1827 • Fax: (503) 624-1635  
email: [sales@powermax.com](mailto:sales@powermax.com)

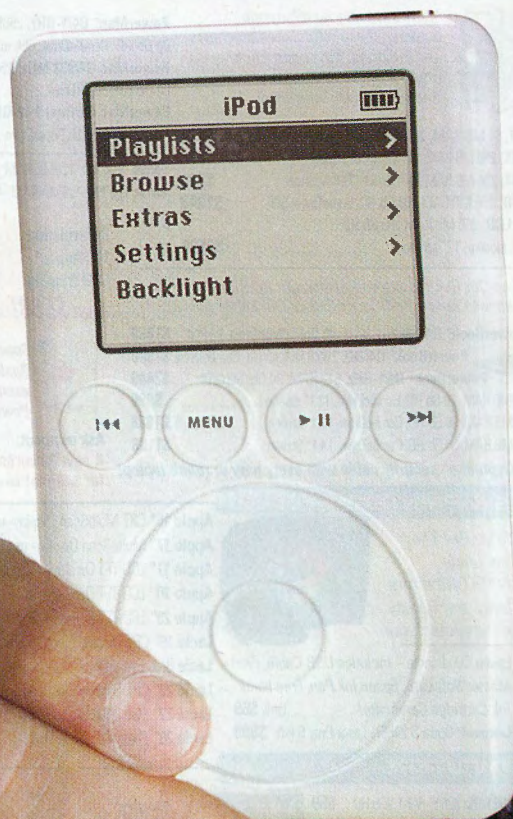




# MacConnection®



Authorized  
Reseller



## The Easiest Way to Get New Mac Gear!

### Choose from over 100,000 Products

From digital cameras to advanced graphics printers and enterprise networks—get everything you need in one place—MacConnection.

### Talk to Dedicated Mac Experts

We'll help you choose the right systems, software, and peripherals—and back everything with the best customer service on the planet.

### Get Everything Overnight™

Order in-stock items by 2:00 a.m. or custom systems by midnight and still get them the next day.

\* Offer valid on orders placed on [www.macconnection.com](http://www.macconnection.com). Orders must be for \$150 or greater and shipped within the contiguous 48 states via "Ground" shipping. Go to [www.macconnection.com](http://www.macconnection.com) to learn more.

**NEW!**

**LACIE**

**NOW TWICE  
AS FAST!**

FireWire 800 &  
USB 2.0 500GB  
Hard Drive

#434324 **\$1049**

**Canon**



**BORDERLESS  
13" X 19"  
PRINTS!**

i9100 Photo Printer

#433398 **\$499**

**Adobe everywhere  
you look**

Adobe Design Collection

**NOW INCLUDES  
ACROBAT 6.0!**

Adobe Design  
Collection

#443684 **\$1199**

**palm** AUTHORIZED  
RESELLER



**FREE LEATHER  
CASE INCLUDED  
— \$40 VALUE!**

Tungsten C  
w/802.11b Wi-Fi

#439166 **\$499**





## NEW iPod

With **FREE XtremeMac Mobility Bundle**

- 15GB or 30GB models • Weighs less than 2 CDs
- Stores up to 7,500 Songs • 30GB Only **\$494** #444230



**\$50 REBATE!**

### NEW



eMac

With **FREE 256MB RAM\***

1GHz G4 w/17" Display

Only **\$994** After Rebate

#443488

**\$100 REBATE!**



iBook

With **FREE 384MB RAM\***

900MHz G3 w/14.1" TFT

Only **\$1494** After Rebate

#441425

**\$100 REBATE!**



PowerBook

With **FREE 512MB RAM\***

1GHz G4 w/17" TFT

Only **\$3294** After Rebate

#425790

\* \$29.95 memory installation fee applies

**WORLD'S FIRST  
CONSUMER  
HD DIGITAL  
CAMCORDER!**

## JVC



GR-HD1

#440162 **\$3499**

macromedia



### SAVE \$450

ON STUDIO MX  
WITH MAC  
PURCHASE

- Flash MX
- Fireworks MX
- Freehand MX
- Dreamweaver MX

Studio MX

#442616 **\$399**

## The Best Place For Macs Since 1984

800.998.0031

macconnection.com





## The all-new Apple iPod!

Now you can carry up to 7,500 songs anywhere you go!

New iPod starting at **\$294!**

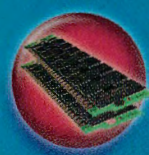
### Revolutionary Features:

- Ultra-portable 10, 15 or 30GB hard drive
- Contacts, calendars, to do lists and text notes
- Backlit LCD screen and illuminated buttons
- Touch sensitive scroll wheel
- 8 hour rechargeable lithium ion battery
- Made for Macintosh and Windows

### New Apple iPod Series

#158577	10GB iPod	<b>\$294</b>
#158580	15GB iPod with FREE Dock & Carrying Case	<b>\$394</b>
#158582	30GB iPod with FREE Dock & Carrying Case	<b>\$494</b>

## Only at MacMall!



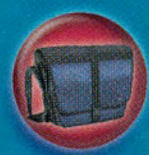
up to **512MB RAM FREE!** (Up to a \$300 Instant Value!)

Available with purchase of select Apple® computer models. \$39.99 installation fee applies.



**FREE USB Floppy Drive!†**

With select iMac or eMac purchase. See below for details. After \$44.99 mail-in rebate. #117660



**MacMall Exclusive! FREE Targus Carrying Case!†**

With any Apple iBook or 12.1" or 15.2" PowerBook purchase. After \$29.95 mail-in rebate. While supplies last. #882187



**Dream On.— Save \$500!**

Macromedia Studio MX suite only \$399 with purchase of any Apple computer through 7/31/03. Price without purchase of Apple computer is \$899. #157659



**FREE Software!**

Free iPuppet Collin's Classic #362040, Free Tomb Raider Chronicles #959307 and Free Total Training for Apple OS X #139546 with any order while supplies last. Free MYOB FirstEdge with any Apple computer purchase. Additional processing fees apply. #638065

# New from Apple—eMac and iPod models that ho

## Performance and value all-in-one!

Get power, performance and value in an all-in-one desktop computer that's as easy to use as it is to afford. Starting at just \$794, the new eMac® G4 features a more powerful processor, a faster CD and DVD-burning SuperDrive and Apple's integrated iLife applications for making the most of your music, photos and movies.

- ▶ Up to 1GHz PowerPC G4 processor
- ▶ 17" (16" viewable) flat CRT display
- ▶ Up to 256MB of SDRAM; supports up to 1GB
- ▶ Up to 80GB Ultra ATA hard drive
- ▶ Choice of Combo drive (DVD-ROM/CD-RW), SuperDrive (DVD-R/CD-RW) or CD-ROM drive
- ▶ ATI Radeon 7500 with AGP 4X support
- ▶ 32MB dedicated DDR SDRAM memory
- ▶ Built-in 10/100Base-T Ethernet
- ▶ 56K modem ▶ AirPort Extreme ready
- ▶ Two FireWire 400 ports
- ▶ Five USB ports (three on system and two on keyboard)



**NEW! eMac G4 starting at FREE 256MB Extra RAM!\***

**\$794!**

### Apple eMac G4 Series

#173406	eMac G4 800MHz/384MB Total*/CD-ROM	<b>\$794*</b>
#173401	eMac G4 1GHz/384MB Total*/Combo	<b>\$994*</b>
#173405	eMac G4 1GHz/512MB Total*/SuperDrive	<b>\$1,294*</b>

## The most compact, full-featured Mac!

### Sports a leading-edge design!

The 12.1" Apple PowerBook G4 is smaller than the iBook and even smaller than

the PowerBook Duo and yet it features a slot-loading SuperDrive with DVD-R capabilities or Combo drive.

- ▶ 867MHz PowerPC G4 processor
- ▶ 12.1" TFT XGA active-matrix display
- ▶ 256MB SDRAM ▶ 40GB hard disk drive
- ▶ Combo drive (DVD-ROM/CD-RW) or SuperDrive
- ▶ NVIDIA GeForce4 420 Go with 32MB of DDR SDRAM

- ▶ One FireWire 400 and two USB Ports
- ▶ Built-in Bluetooth
- ▶ AirPort Extreme ready
- ▶ Lithium-ion battery with up to 5 hours of battery life



Authorized Reseller

The compact 12.1" PowerBook G4 is the smallest portable that Apple has ever created!



**New 12.1" Display! Weighs only 4.6 lbs.!**

### 12.1" PowerBook G4 Series

#116413	867MHz G4/12.1"/256MB Total/Combo	<b>\$1,794*</b>
#116411	867MHz G4/12.1"/256MB Total/SuperDrive	<b>\$1,994*</b>

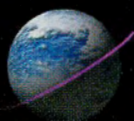
**12.1" PowerBook G4 starting at FREE AirPort Extreme Card!**

**\$1,794!\***









# Other World Computing

Serving the Mac Universe since 1988

**800.275.4576**



**OS X ON LEGACY MACS!**  
**FREE** Installer  
Software from OWC



eshop.macsales.com/osxcenter

Excellent Service

Competitive Prices

Quality Products

Expert Tech Staff

## PowerBook G3 & iMac 233-333MHz

OWC PC100 Low Profile lets you max your memory at up to 512MBs! GREAT for OS 9 & OS X!

Low Profile 256MB will install in lower memory slot of all listed models allowing a new max memory of up to 512MBs!



128MB PC100 CL2/PC66 Low Profile SO-DIMM **\$33.95**  
256MB PC100 CL2/PC66 Low Profile SO-DIMM **\$64.99**

## Legacy Macs

Go up to 512MB, 1GB, or MORE! Perfect for Memory Starved Applications & OS X!



## 128MB Mac 5V DIMM ONLY \$25.99!

Get up to 512MB, 1GB, or MORE - 100% compatible with G3/G4 upgrades, great for memory starved applications & OS X too!

OWC stocks memory for just about EVERY Apple Mac/Clone made! Call or visit our website [www.MacSales.com](http://www.MacSales.com) to get the right memory for your Mac!

## More storage for PowerMacs!



40GB Maxtor DiamondMax **\$69.95**

ATA/133, 7200RPM, 2MB buffer

80GB IBM/Hitachi 180XP **\$95.99**

ATA/6, 7200RPM, 2MB buffer

120GB IBM/Hitachi 180XP **\$129.99**

ATA/6, 7200RPM, 8MB buffer

180GB Western Digital Caviar **\$219.99**

ATA/6, 7200RPM, 8MB buffer

Call for 200GB, 250GB, 320GB drives  
NOW IN STOCK!

## ATA/IDE PCI cards

ADD A FAST ATA/133 HD Interface to ANY Mac with a PCI Slot  
Supports up to 4 ATA/IDE drives, data rates up to 133 MB/s!  
100% Compatible and Bootable Apple OS 8.x, OS 9.x, OS X 10.x

Plug and Play, 3 year warranty



**SONNET**  
SIMPLY FAST

Sonnet Temp ATA/133  
Mac PCI controller **\$89.99**

The only true Mac native ATA controller!



**SIIG**, Inc.

SIIG ATA/133 Mac  
PCI controller only **\$75.99!**  
Plug and Play, 5 year warranty



**SIIG**, Inc.

SIIG Dual Channel ATA/133  
RAID PCI controller **\$139.99!**  
Hardware RAID card for HIGH performance, 5 year warranty

OWC takes the guesswork out of upgrading

## Need memory?

Make your Mac run faster with a memory upgrade from OWC!

- Lifetime Advance Replacement Warranty
- Fully meets or even exceeds Apple specs
- UPS/FedEx AIR Delivery from \$4

## PowerMac G4 'Mirrored Door'

For PowerMac G4 'Mirrored Door' Dual  
867/1GHz/1.25GHz/1.42GHz, 1GHz, and all  
Xserve Models



PC2100 DDR 266MHz for Apple Power Mac G4  
'Mirrored Door' 1GHz & Dual 867MHz; Xserve  
1GHz and Dual 1GHz models  
256MB ..... **\$34.95** 512MB ..... **\$57.95**



PC2700 DDR 333MHz for Apple Power Mac G4 'Mirrored Door'  
1GHz, Dual 867MHz / 1GHz / 1.25GHz / 1.42GHz; Xserve 1GHz /  
1.33GHz, Dual 1GHz / 1.33GHz models  
256MB ..... **\$34.99** 512MB ..... **\$59.99**

## iMac G4/1GHz, PowerBook G4 12/17"



PC2100 DDR 266MHz SO-DIMM for  
PowerBook G4 12", iMac G4/1GHz models  
256MB .. **\$37.95** 512MB .. **\$79.95**  
PC2700 DDR 333MHz SO-DIMM for all  
PowerBook G4 12" & 17", iMac G4/1GHz  
256MB .. **\$38.99** 512MB .. **\$85.99**

## Hard Drive Solutions for your Mac

## 2.5" drives for Apple laptops!



More Internal HD Space for On The Go  
PowerBook G3/G4s and iBooks! Upgrade to  
a Bigger, Faster, Quieter drive today!

20GB Fujitsu MHS2020AT **\$97.99**

4200RPM, 2MB buffer

40GB IBM/Hitachi 40GNX **\$145.99**

5400RPM, 8MB buffer

60GB Fujitsu MHS2060AT **\$199.99**

5400RPM, 2MB buffer

60GB Toshiba MK6022GAX **\$279.95**

5400RPM, 8MB buffer

80GB IBM/Hitachi 80GH **\$309.95**

4200RPM, 8MB buffer

## Power Mac G4 AGP, iMac G3 350+, eMac

All PowerMac G4 Sawtooth / Graphics / Gigabit  
/ Digital Audio / Quick Silver I&II Models  
including Dual Processor Equipped; iMac  
G3/350-700MHz Models, All eMac G4 Models



256MB PC133 CL3 / PC100 CL2 SDRAM ..... **\$34.99**  
512MB PC133 CL3 / PC100 CL2 SDRAM ..... **\$79.99**

## iBooks, PowerBook G3/G4, iMac G4

All iBooks, all iMac G4 15", iMac G4 17"  
800MHz, all PowerBook G4 15" (Titanium),  
PowerBook G3 FireWire(yr2000/aka Pismo)



256MB PC133 CL3/PC100 CL2 SO-DIMM ..... **\$35.99**  
512MB PC133 CL3/PC100 CL2 SO-DIMM ..... **\$79.99\***  
512MB PC133 CL3/PC100 CL2 SO-DIMM LP ..... **\$99.97**

\* This module is compatible with PowerBook G3  
FireWire and listed iMac G4 Models ONLY.

## PowerMac G3, G4 'Yikes' PCI

All G3 Beige, Blue & White, G4 PCI 'Yikes'



PC100 CL2/PC66 SDRAM  
**SPECIAL!**  
256MB **\$31.99**

## What to do with your old drive?



Make it EXTERNAL:

OWC Mercury Express USB 1.1/2.0  
Enclosure Kit **\$34.99**

Use your 2.5" drive on any USB equipped Mac or PC

OWC Mercury Express FireWire  
Enclosure Kit **\$49.99**

Use your 2.5" drive on any FireWire equipped  
Mac or PC



OWC Mercury Elite Pro  
FireWire+USB 2.0/1.1 **\$99.95**

Use 3.5" ATA/IDE drives on any system with FireWire or USB



Make it a PCI Internal PowerMac drive:



Sonnet TempoHD ATA/133 Mac PCI  
Controller **\$95.99**

2.5" drive mounts RIGHT on the card + TempoHD also  
supports up to 2 additional 3.5" drives for ATA/133 speeds!

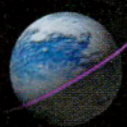


visit **macsales.com**

School / University / Government / Corporate Purchase Orders gladly accepted. (Subject to credit approval)



Representatives available Mon-Thurs 8:30am - 8pm,  
Fridays 8:30am - 6PM, Saturdays 10am-4pm CST.



# Other World Computing

Serving the Mac Universe since 1988

**800.275.4576**

Excellent Service

Competitive Prices

Quality Products

Expert Tech Staff



**OS X ON LEGACY MACS!**  
**FREE Installer**  
**Software from OWC**



eshop.macsales.com/osxcen

## OWC Mercury Elite FireWire & USB 2.0 storage

The OWC Mercury Elite Series delivers Highly Reliable, High Performance Storage at the best possible prices!

### All OWC Mercury Elite solutions feature:

- Cool Blue LED Activity Indicator • Super quiet operation • Large 2MB or 8MB Data Buffer • Fully suitable for Digital Audio/Video • Ship pre-configured plug and play for Mac OS 8.5.1 - 9.2.2 & OS X • Intech Speedtools Mac Utility Software Included • Fully compatible with Windows & Unix OS versions that support FireWire or USB • Full 2yr warranty

### Standard features for Mercury Elite FW400 + USB 2.0/1.1:

- Custom Oxford911 Bridge Solution • Sustained Data Rates up to over 40 Megs/second • Two 6 Pin FireWire 1394a FW400 Ports • One standard USB 2.0/1.1 Port • (1) 6 to 6 FireWire and (1) USB 2.0/1.1 36" connecting cables

### Standard features for the Mercury Elite Pro FW800 + USB:

- Custom Oxford922 Bridge Solution • Sustained Data Rates up to over 55 Megs/second • Fully backward compatible to FW400 1394a • Two 9 Pin FireWire 1394b FW800 Ports • One 6 Pin FireWire 1394a FW400 Port • One standard USB 2.0/1.1 Port • (1) 9 to 9 pin FW800, (1) 6 to 6 pin FW400 and (1) USB 2.0/1.1 36" connecting cables

James Coates of the Chicago Tribune:

"Mac users likely will just break into smiles when they plug this high speed hard drive into the FireWire ports on their machines."

MyMac.com review 5 out of 5

Charles Carr from Computer Edge about buying an OWC Mercury drive: "You'll probably be happy you did." 4 out of 5. "The Elite is ideal for professionals and consumers who need convenient, portable storage for large amounts of data."



	FW400 + USB2.0/1.1	Elite FW800 + USB2.0/1.1
40GB 7200RPM 2MB	<b>\$149.99</b>	<b>N/A</b>
80GB 7200RPM 2MB	<b>\$179.99</b>	<b>\$249.99</b>
120GB 7200RPM 2MB	<b>\$209.99</b>	<b>\$279.99</b>
120GB 7200RPM 8MB	<b>\$229.99</b>	<b>\$299.99</b>
160GB 7200RPM 8MB	<b>\$269.99</b>	<b>\$339.99</b>
180GB 7200RPM 8MB	<b>\$299.99</b>	<b>\$359.99</b>
200GB 7200RPM 8MB	<b>\$329.99</b>	<b>\$399.99</b>
250GB 7200RPM 8MB	<b>\$449.99</b>	<b>\$519.99</b>
320GB 5400RPM 2MB	<b>\$459.99</b>	<b>\$529.99</b>

## OWC Mercury On-The-Go 2.5" FW400/USB

Up to 80 gigs that fits in a shirt pocket!

### All On-The-Go Drives Feature:

- Powered by FireWire Bus or Included AC Power Adapter • Cool Blue LED Activity Indicator • Super Quiet Operation • Large Data Buffer up to 16MB • Fully Suitable for Audio/Video
- Ship Pre-configured Plug and Play for Mac OS 8.5.1-9.2.2 & OS X • Intech Speedtools Mac Utility Software Included • Fully compatible with Windows & Unix OS versions that support FireWire • Weighs less than 12 Ounces! • All Cables, Carrying Case, and Full 1 Year Warranty included

Drive may be powered by FireWire Bus or with included power adapter.

	FireWire	FW + USB 2.0/1.1
20GB 5400rpm 2MB	<b>\$189.97</b>	<b>\$199.99</b>
40GB 4200rpm 2MB	<b>\$209.97</b>	<b>\$219.99</b>
40GB 5400rpm 8MB	<b>\$229.97</b>	<b>\$239.99</b>
60GB 4200rpm 2MB	<b>\$279.97</b>	<b>\$289.99</b>
60GB 5400rpm 16MB	<b>\$349.97</b>	<b>\$359.99</b>
80GB 4200rpm 8MB	<b>\$389.97</b>	<b>\$399.99</b>



MacSofa: "It fits right in with the Mac look and is super silent and easy to set-up - you couldn't ask for a better drive! Mercury Elite receives a perfect score!"



## OWC Mercury CD/CD-R/CD-RW - DVD/DVD-R/DVD-RW - FireWire + USB 2.0/1.1



High Speed for backup, audio, video and more - 100% Apple iTunes compatible! Plug and Play with any Mac or PC that has an available FireWire or USB port. How easy is that?



### CD-R/RW External Solutions:

### OWC Mercury FW+USB 52x24x52x CD-R/RW only **\$129.99**

Includes Roxio Toast Lite 5.2.x, 25 Pieces 52X 80 Min CD-R Media, 1 Piece 80 Min CD-RW Media, All Connecting Cables, 1 Year Warranty. [info@owc.com](mailto:info@owc.com)

### DVD-R/RW & CD-R/RW 'SuperDrive' Solutions:

### OWC Mercury FW+USB DVR-105 'SuperDrive' 4x2x12 DVD-R/RW + 16x8x32 CD-R/RW only **\$339**

Includes CharisMac Discrite 5.x, 5 Pieces DVD-R Media, 25 Pieces 52X 80 Min CD-R Media, 1 Piece 80 Min CD-RW Media, All Connecting Cables, 1 Year Warranty



Call or Visit [www.MacSales.com](http://www.MacSales.com) for our full FireWire/USB line which also includes:



## FireWire & USB add-on card from only **\$19.99!** Connect to thousands of new USB and FireWire Products!

### FEATURE PRODUCT

**MacAllly \$79.95**

**2-port FW & 2-port USB 2.0/1.1 PCI Card**

Save a slot and add the latest USB 2.0+1.1 and FireWire support to any Mac with a PCI Slot! Compatible with Apple OS 8.5-9.2.x, OS X.

### SPECIAL!

**MacAllly \$19.99**

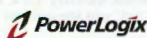
**3-port FireWire PCI Card**

Add FireWire to ANY Mac with a PCI Slot! Plug and Play compatible with Apple OS 8.5-9.2.x and OS X



**MacAllly 2-port USB 1.1 PCI Card \$24.95**

Add USB to ANY Mac with a PCI slot, Plug and Play compatible with Apple OS 8.5.1 - 9.2.x and OS X



**PowerLogic RapidFire 2 Port USB 3 Port FireWire PCI Card \$59.95**

FireWire and/or USB lets you connect to the Apple iPod, Digital Cameras, Digital Camcorders, CD/DVD Burners, Hard Drive Storage, Keyboards, Mice, Scanners, Printers, and MUCH MORE! If your computer didn't come with one of these interfaces, they are easy to add so you too can plug and play USB & FireWire devices!





visit **macsales.com**

School / University / Government / Corporate Purchase Orders gladly accepted. (Subject to credit approval)



Representatives available Mon-Thurs 8:30am - 8pm,  
Fridays 8:30am - 6PM, Saturdays 10am-4pm CST.



## Other World Computing

Serving the Mac Universe since 1988

**800.275.4576**

Excellent Service

Competitive Prices

Quality Products

Expert Tech Staff



**OS X ON LEGACY MACS!**  
**FREE** Installer  
Software from OWC



finalist  
macworld  
eddy

**eshop.macsales.com/osxcenter**

Have the Power of X on your Pre-Beige G3 PowerMac!



Internet  
access for  
**MACS  
ONLY**

## FasterMac.NET Nationwide 56K v.90/92 dial-up from **ONLY \$9.92/month!**

5 FREE e-mail accounts • 10MB web space • **FOR MAC USERS ONLY!**

Call 1-800-869-9152 or sign up online at [www.FasterMac.net](http://www.FasterMac.net)

### OWC Laptop Screen Protectors

## Protect your investment!

OWC Laptop Screen Protectors PREVENT marks on your PowerBook LCD Screen! FREE iKlear Apple Polish included for a 'Klean Start!'

**LSP WallStreet, Lombard,  
Pismo \$14.99**



**LSP - PowerBook G4  
15" 'Titanium' \$15.99**



**LSP for all iBooks,  
PowerBook G4 12" \$13.95**



Made in the USA of top quality, glove soft leather, OWC LSPs are both a durable and attractive solution to a known problem.

### PowerBook Accessories



**Roadtools  
Traveler CoolPad  
\$19.95**

For PowerBook, iBook, For  
PowerBook, iBook, ANY-  
Laptop! Available in Black or  
White. Rotates 360 degrees  
with ease.



**Roadtools  
Podium CoolPad  
\$29.95**

For PowerBook, iBook, ANY-  
Laptop! Available in Black or  
White



**OWC Mobility Bundle #4 for G4 PB \$54.95**

Includes TIG4 LSP, LapBottom, and RoadTools Podium(black) - Save 25%!



**OWC Mobility Bundle #6 for iBook \$49.95**

### PowerBooks CD/DVD Drives

**OWC PowerBook G4 CD+R/RW  
& DVD-ROM Internal Drive \$249.99**



**OWC PowerBook G4 CD+R/RW & DVD+R/RW  
Internal Drive \$449.99**

Take out existing PowerBook G4/400-500-550-667MHz CD-Rom  
or DVD-Rom Drive and upgrade to a faster drive that can  
BURN! New kit 100% compatible with all hardware/software,  
plug and play. 1 Year OWC Warranty.

### Mac PowerBook Batteries



**Apple PowerBook G3 Lombard  
(yr '99) / Pismo (yr '00) \$149.99**

### Make music like the pros!

**macsales.com/music**



**REASON**

Create exciting music tracks with this virtual rack full of  
synths, loop players, samplers, mixers, effects, sound/loop  
library and more... all inside your computer!

**arKaos**

Generate compelling video and 'remix' your images with  
effects in real time in sync with any audio. DJ's, Bands/Artists,  
Clubs, Multimedia/Events producers, Visual Artists...  
See our music demos, articles, and more online. Visit  
[www.macsales.com/music](http://www.macsales.com/music)

### Mac Audio & Video

**Contour Design USB  
Shuttle Pro Controller  
\$99.95**



Excellent USB device for controlling your Mac Audio and  
Video functions. Replaces key and mouse strokes + much  
more for accurate control.

Call or visit [www.macsales.com](http://www.macsales.com) for our COMPLETE line of Mac  
Audio/Video hardware & software.



**APPLE OS X 10.2  
Jaguar \$79.99!**

**APPLE OS 9.1  
ONLY \$49!**



**YE Data 6 in 1 Digital Media  
Reader/Writer \$29.99**

- Reader + 128MB SmartMedia Bundle **\$64.99**
- Reader + 256MB Compact Flash **\$89.99**

Connects to your Mac via USB and lets you read/write  
Compact Flash, Smart Media, Memory Stick, SD Memory,  
MultiMedia Card, and Microdrive!

### Keyboards and Mice



iOptNet and iOptNet Jr. Optical Scrolling Mice -  
5 color covers included

**MacAly iOptNet 3 Button USB \$31.99**  
**MacAly iOptNet Jr. 3 button USB \$27.99**

Same as iOptNet, but ideal for travel or smaller hands!



**OWC Apple 7 in 1 Bit Kit \$7.95**

Just what you need for installing memory  
or a hard drive and more for Apple  
Desktops, PowerBooks, iBooks/More

### Mac PRAM Batteries



**3.6V PRAM Replacement Battery \$5.99**

High-Capacity 3.6V Lithium Cell



**4.5V PRAM Replacement Battery \$7.99**

Standard Rayovac 4.5V Computer PRAM Battery

### GriffinTech 'Cool Goodies'



**Griffin PowerMate USB \$44.95**

Rotary Audio Controller and more!

**Griffin iMic USB  
MicroPhone Adapter \$36.97**



### Protect your iPod or laptop

**iSkin iPod and Keyboard protectors only  
\$18.99 to \$19.99**



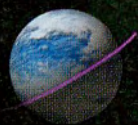


visit **macsales.com**

School / University / Government / Corporate Purchase Orders gladly accepted. (Subject to credit approval)



Representatives available Mon-Thurs 8:30am - 8pm,  
Fridays 8:30am - 6PM, Saturdays 10am-4pm CST.



# Other World Computing

Serving the Mac Universe since 1988

**800.275.4576**

Excellent Service

Competitive Prices

Quality Products

Expert Tech Staff

Other World Computing is the Mac upgrade expert! We stock the FASTEST G3 / G4 upgrades, video cards, and MORE! Let us make your Mac a FASTER Mac!

## AGP Processor Upgrades



G4 AGP Graphics/Sawtooth



Digital Audio



G4 Cube



QuickSilver I



QuickSilver II

**OWC**

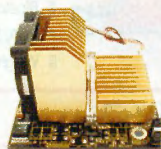
PowerMac G4 now

Your PowerMac G4 made EXTREME!

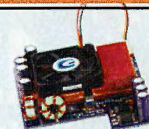
**NEW OWC Mercury Extreme G4/1.2-1.33GHz with 2MB DDR L3 cache \$549.99**

- 700MHz, 800MHz, 1GHz models also available
- 3 year OWC warranty
- SPECIAL 30 day 100% money back guarantee!

For all PowerMac G4 AGP Models 100/133MHz Bus except Cube. Includes Quiet, High Efficiency Fan/Heatsink pre-attached for easy upgrade installation.



**Giga**  
DESIGNS



G-Accelerator

- G4/1.25-1.33GHz 2MB DDR L3 \$549.99
- G4/1.0 GHz 2MB SDRAM L3 \$399.99
- G4/800MHz 2MB SDRAM L3 \$269.99

PowerMac G4 AGP Models 100/133MHz Bus except Cube. 3 Year GigaDesign Warranty. Includes Heatsink and Fan factory attached for easy upgrade installation.

- See real world benchmarks at [www.macsales.com/upgrades](http://www.macsales.com/upgrades)
- \$\$\$ OWC gives cash back for your old processor too! \$\$\$
- Upgrading your PowerMac is Plug and Play simple - 100% compatible with Hardware/Software

**SONNET**  
SIMPLY FAST



- G4/1.2GHz 2MB DDR L3 \$579.99
- G4/1.0GHz 2MB DDR L3 \$479.99
- G4/800MHz 2MB DDR L3 \$289.99

Crescendo/ST all feature 2MB of DDR L3 cache

Crescendo/ST G4 Upgrades are compatible with all AGP Equipped Power Mac G4 and G4 Cube Models\*. Sonnet is well known for their quality products and support with the Crescendo/ST being just one more example! Plug and Play for new Mac Speed!

\*Crescendo Installation Kit required for G4 CUBE ONLY - \$22.95

**PowerLogix**

PowerLogix upgrades you to Dual Processor computing power!

PowerForce Dual G4

- All feature 2MB L3 cache (2x1MB)
- Dual G4/1.2GHz \$979.99
- Dual 1GHz \$779.99
- Dual 867MHz \$649.99



PowerLogix G4/800 - 1.2GHz single processor upgrades available from \$249.99. Available for most PowerMac G4 AGP 100/133MHz Bus Models except Cube. New heatsink included with upgrade. 2 Year PowerLogix Warranty.

## PowerBook Processor Upgrades

**NuPower Pismo G4/500MHz \$289.99**

**newer technology**



NewerTech is BACK! Back with newer and FASTER upgrades for you Mac! Give your PowerBook G3 FireWire (aka yr2000/Pismo) G4 Power! Have the full capabilities of the AltiVec engine at your disposal providing a night and day difference in performance for all AltiVec enhanced applications as well as OS X at large!

**Crescendo WS G4/500MHz with 1MB 2:1 \$395.99**

**SONNET**  
SIMPLY FAST



Upgrade your Wallstreet VII G3 PowerBook (any speed) to the power of a G4/500MHz with AltiVec! A big boost for OS X, OS 9 and all your applications. As an added bonus, you can also have up to 512MBs of memory now too!

**PowerLogix BlueChip LS G4/500MHz w/ 1MB L2 \$397.99**

**PowerLogix**



Upgrade your PowerBook G3 Lombard 333/400MHz to the performance of an AltiVec Enhanced G4/500MHz processor! Added performance for everything and a big boost for OS X and any of your AltiVec Enhanced Applications!

## G3 & G4 PCI Upgrades

**SONNET**  
SIMPLY FAST

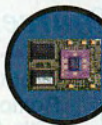
PowerMac 73-9600 G3/G4 Upgrades by **newer technology** Upgrade 73/75/76/85/86/95/9600s & Compatible PowerComputing Clones to a G3 or even up to a G4/800MHz Processor! Get the best performance from your older, but still VERY capable Mac with Apple OS 8.6 - 9.2.2; OS X 10.1 and higher! Fully compatible your hardware/software, an instant performance boost by replacing your existing processor card.

- Crescendo G3/450MHz 1MB 2:1 L2 only \$139.95
- Crescendo G3/500MHz 1MB 2:1 L2 \$179.95
- Crescendo G4/700MHz 1MB 3:1 L3 \$297.99
- Crescendo G4/800MHz 1MB 4:1 L3 \$395.99



## OWC Mercury ZIF Upgrades

**OWC** \*\*\*



- G4/450MHz with 2:1 1024k L2 cache \$189.94
- G4/500MHz with 2:1 1024k L2 cache \$259.94
- G4/550MHz with 2.5:1 1024k L2 cache \$299.94

Upgrades for PowerMac G3 Beige, G3 Blue & White, G4 'Yikes' PCI. High Quality, High-Performance, High-Reliability. OWC uses ONLY processors rated for the speed advertised, if not faster!

**PowerLogix**  
**SONNET**  
SIMPLY FAST

- G3/800MHz with 1:1 512k L2 cache \$297.99
- G4/1GHz with 1MB L3 cache \$589.99

See all the upgrades we have for your specific Mac with the MyOWC Compatibility Guide: <http://eshop.macsales.com/MyOWC/index.cfm>

## Get High-Speed accelerated 2D/3D video from ATI



Perfect for Apple OS X and Quartz Extreme

**Radeon 9000 MacEdition AGP w/64MB DDR for PowerMac G4 \$165.99**

Supports up to two displays simultaneously. Resolutions up to 2048x1535 supported!

**ATI Radeon 7000 MacEdition PCI w/32MB DDR for any PCI slot Mac \$119.99**

Features S-Video, VGA, and DVI ports; DVD playback, resolutions up to 2048x1535 supported!



**17"**  
TFT Megawide  
Screen Active  
Matrix

**12"**  
TFT Megawide  
Screen Active  
Matrix

Save \$500 off MSRP!  
Macromedia Studio MX  
only \$399 when purchased  
with any NEW Apple CPU.  
Offer good through 7/31/03.

**PLUS**  
Call us or visit  
[www.maczone.com](http://www.maczone.com)  
for all the latest  
PowerBook offers.

Available with  
SuperDrive! Call  
for details

## NEW Apple PowerBooks *Less Is More, AND More Is More*

### NEW! 12" Apple PowerBook G4

- Smallest, most affordable full-featured notebook
- High-resolution, 1024 x 768 TFT
- Lightweight durable aluminum alloy enclosure
- Slot-loading DVD/CD-RW drive
- 32MB nVIDIA GeForce4 420 Go graphics card
- Bluetooth built in, AirPort Extreme ready
- VGA, S-Video and composite video output
- Weights only 4.6 pounds

### NEW! 17" Apple PowerBook G4

- The first notebook ever with a 17" TFT; 1440 x 900
- Backlit keyboard with ambient light sensors
- Lightweight durable aluminum alloy enclosure
- Slot-loading SuperDrive DVD-R/CD-RW
- 64MB nVIDIA GeForce4 440 Go graphics card
- Bluetooth and 54 Mbps AirPort Extreme built in
- NEW 800 Mbps FireWire and connections galore
- Weights only 6.8 pounds

867MHz G4	867MHz G4	1GHz G4	1GHz G4 <span>Now Shipping!</span>
<ul style="list-style-type: none"> <li>12" TFT Display</li> <li>256MB DDR Memory</li> <li>40GB Hard Drive</li> <li>Combo DVD-ROM/CD-RW</li> <li>nVIDIA GeForce4 420 with 32MB DDR SDRAM</li> </ul>	<ul style="list-style-type: none"> <li>15.2" TFT</li> <li>256MB Memory</li> <li>40GB Hard Drive</li> <li>Combo DVD/CD-RW</li> <li>AirPort Card Ready</li> <li>ATI Mobility Radeon 9000 with 32MB DDR SDRAM</li> </ul>	<ul style="list-style-type: none"> <li>15.2" TFT Display</li> <li>512MB Memory</li> <li>60GB Hard Drive</li> <li>SuperDrive DVD-R/CD-RW</li> <li>AirPort Card Included</li> <li>ATI Mobility Radeon 9000 with 64MB DDR SDRAM</li> </ul>	<ul style="list-style-type: none"> <li>17" TFT Display</li> <li>512MB DDR Memory</li> <li>60GB Hard Drive</li> <li>SuperDrive DVD-R/CD-RW</li> <li>AirPort Extreme Included</li> <li>nVIDIA GeForce4 440 with 64MB DDR SDRAM</li> </ul>
<b>\$1794<sup>98</sup></b> #169635	<b>\$2294<sup>98</sup></b> #159229	<b>\$2794<sup>98</sup></b> #159230	<b>\$3294<sup>98</sup></b> #169634

Apple Instant  
Loan starting at only **\$39** per month

#168154 AppleCare 3-Year Protection Plan – PowerBook G4... \$349.99

**UP TO 14.1"**

**NEW!**

**FREE\***  
Up to 384MB Memory  
\*After rebate. See bottom of page for details.

## NEW Apple iBook G3 *Faster and more affordable than ever!*

800MHz G3	900MHz G3	900MHz G3
<ul style="list-style-type: none"> <li>12.1" TFT Display</li> <li>128MB Memory</li> <li>30GB Hard Drive</li> <li>CD-ROM Drive</li> <li>ATI Mobility Radeon 7500 with 32MB VRAM</li> </ul>	<ul style="list-style-type: none"> <li>12.1" TFT Display</li> <li>128MB Memory</li> <li>40GB Hard Drive</li> <li>Combo DVD/CD-RW Drive</li> <li>ATI Mobility Radeon 7500 with 32MB VRAM</li> </ul>	<ul style="list-style-type: none"> <li>14.1" TFT Display</li> <li>256MB Memory</li> <li>40GB Hard Drive</li> <li>Combo DVD/CD-RW Drive</li> <li>ATI Mobility Radeon 7500 with 32MB VRAM</li> </ul>
<b>\$994<sup>98</sup></b> #184124	<b>\$1294<sup>98</sup></b> #184125	<b>\$1494<sup>98</sup></b> #184126

Apple Instant  
Loan starting at only **\$22** per month

#168153 AppleCare 3-Year Protection  
Plan – iBook G3 ..... \$249.99

## Mac Zone Is Your Single Source for the Latest Hardware & Software Products!

**NEW Version!**  
Adobe® Acrobat®  
6.0 Professional  
Upgrade from 4.x  
and 5.x Standard

New tools  
let business,  
creative and  
engineering  
professionals  
to reliably  
and efficiently  
collaborate on  
graphically com-  
plex documents.

**\$134<sup>97</sup>**  
#187675

**FREE 5-Pack of CD-R\***  
Roxio Toast  
with Jam

**\$159<sup>97</sup>**  
#141946  
\*While supplies last.

Super capacity and speed  
LaCie 120GB  
7200 RPM  
FireWire Hard Drive

**\$229<sup>99</sup>**  
#154800  
#1013991 LaCie 200GB d2 ..... \$399.99

**NEW!**  
Edit video  
like a pro!  
Final Cut Pro  
4 Upgrade

**\$399<sup>99</sup>**  
#184120

Less than  
30¢ per disc  
Fuji 24X 700MB  
CD-R 100-Pack

**\$27<sup>99</sup>**  
#141962

Great value  
in a half-gig  
Kingston  
512MB  
CompactFlash  
Memory Card

**\$119<sup>99</sup>**  
#869507

"Top Selling Database"  
FileMaker Pro 6 –  
Upgrade\*\*

**\$137<sup>99</sup>**  
#154725  
#154723 FileMaker Pro 6 – Full Version ..... \$269.98  
#161375 FileMaker Mobile 2.1 (for Handhelds)† \$46.99  
\*NPD Intellect 10/02. \*\*Requires FM Pro 5.x.  
†Requires FM Pro 5.5v2/6.

Don't forget  
your AppleCare

AppleCare  
Protection Plan

Starting at \$169<sup>99</sup> – Call for details.



# to 30GB + 7500 songs Now up to 900MHz



Save \$500 off MSRP!  
Macromedia Studio MX  
only \$399 when purchased  
with any NEW Apple CPU.  
Offer good through 7/31/03.

**PLUS**  
**FREE\***  
Up to 512MB Memory  
\*After rebate. See bottom of page for details.

## NEW Apple Power Macs

### Now Up to 1.42GHz Dual G4!

1GHz G4	1.25GHz Dual G4	1.42GHz Dual G4
<ul style="list-style-type: none"> <li>L3 Cache - 1MB DDR SRAM</li> <li>256MB DDR SDRAM</li> <li>60GB Hard Drive</li> <li>Combo DVD-ROM/CD-RW</li> <li>NVIDIA GeForce4 MX with 64MB of DDR SDRAM</li> </ul>	<ul style="list-style-type: none"> <li>L3 Cache - 1MB DDR SRAM</li> <li>256MB DDR SDRAM</li> <li>80GB Hard Drive</li> <li>Combo DVD-ROM/CD-RW</li> <li>ATI Radeon 9000 Pro with 64MB of DDR SDRAM</li> </ul>	<ul style="list-style-type: none"> <li>L3 Cache - 2MB DDR SRAM</li> <li>512MB DDR SDRAM</li> <li>120GB Hard Drive</li> <li>SuperDrive DVD-R/CD-RW</li> <li>ATI Radeon 9000 Pro with 64MB of DDR SDRAM</li> </ul>
<b>\$1494<sup>98</sup></b>	<b>\$1994<sup>98</sup></b>	<b>\$2694<sup>98</sup></b>
#165458	#165459	#165460

Apple Instant Loan starting at only **\$33** per month  
#168151 AppleCare 3-Year Protection Plan - Power Mac G4..... \$249.99



**SAVE \$30\***  
on .Mac subscription  
- now only \$64.98  
\*After \$30 mfr. mail-in rebate.  
Offer good through 6/28/03.

**PLUS**  
**FREE\***  
Up to 512MB Memory  
\*After rebate. See bottom of page for details.

## NEW Apple iMac G4

### Up to 1GHz and 17" LCD!

800MHz G4	1GHz G4
<ul style="list-style-type: none"> <li>15" TFT Display</li> <li>256MB Memory</li> <li>60GB UATA/66 Hard Drive</li> <li>32X Combo DVD/CD-RW Drive</li> <li>2 FireWire / 5 USB</li> <li>32MB NVIDIA GeForce2 MX</li> </ul>	<ul style="list-style-type: none"> <li>17" Widescreen LCD</li> <li>256MB Memory</li> <li>80GB UATA/100 Hard Drive</li> <li>4X SuperDrive DVD-R/CD-RW</li> <li>2 FireWire / 5 USB</li> <li>64MB NVIDIA GeForce4 MX</li> </ul>
<b>\$1294<sup>98</sup></b>	<b>\$1794<sup>98</sup></b>
#165464	#165465

Apple Instant Loan starting at only **\$28** per month  
#168152 AppleCare 3-Year Protection Plan - iMac G4..... \$169.99

### Top Mac Products Available Online at [maczone.com](http://maczone.com)!

**FREE** Tripod and Carrying Case!  
Canon ZR60 MiniDV Digital Camcorder



**\$499<sup>99</sup>**  
#175366

\*Ships with camcorder. While supplies last.



The latest iApps!  
iMovie 3, iPhoto 2,  
iDVD 3, iTunes 3  
iLife Suite

**\$48<sup>99</sup>**  
#169641

**NEW!** 54 Mbps Wireless Performance - 5X faster  
**Apple AirPort Extreme Base Station**



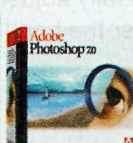
**\$198<sup>99</sup>**  
#169636

**FREE 5-Pack CD-RW!**

QuickBooks Pro 5.0 for Mac  
**\$129<sup>98\*</sup>**  
#159490



\*After \$120 mfr. mail-in upgrade rebate. Offer good through 12/31/03.



Professionals' image editor  
Adobe® Photoshop® 7 Upgrade

**\$134<sup>97</sup>**  
#141955

**FREE 128MB memory card\***  
Canon Powershot G3 4MP Digital Camera



\*While supplies last.  
**\$699<sup>99</sup>**  
#168169

## Apple Displays!



#165462 Apple 17" Studio Flat Panel..... \$699.98  
#165461 Apple 20" Cinema Display..... \$1299.98  
#147870 Apple 23" Cinema Display HD..... \$1999.98

## NEW Apple iPods

Authorized Reseller



### Redefining the portable player

- Weighs less than two CDs
- **NEW**, super-slim design
- Now cross-platform
- **NEW** iPod Dock for charging and syncing
- Sleep timer lets you fall asleep to your music
- All-touch interface is very durable yet sensitive

Dock unavailable on 10GB model.

#184128 10GB Apple iPod without Dock..... \$294.98  
#184129 15GB Apple iPod with Dock..... \$394.98  
#184130 30GB Apple iPod with Dock..... \$494.98

## NEW Apple Xserve DP

### FREE 60-day trial\*

\*Pending qualification.

Apple Xserve Servers	ONLY
#165468 Xserve 1.33GHz/256MB/60GB/CD-ROM	... \$2794.98
#165469 Xserve 1.33GHz DP/512MB/60GB/CD-ROM	... \$3794.98
Apple Xserve RAID Arrays	ONLY
#165470 720 Gigabytes	... \$5994.98
#165471 1.26 Terabytes	... \$7494.98
#165472 2.52 Terabytes	... \$10,994.98

**FREE Memory Offer:** Up to 512MB FREE memory with select Apple computers and professional \$40 installation purchase. 512MB memory offers require mail-in rebates. Allow up to one day for installation. Offer subject to change due to memory price volatility. Call for latest offers. Offer good while supplies last. Not valid with any other Mac Zone offers.

Order by Phone

# 1-800-304-0286

Corporate bids welcome!

A NASDAQ COMPANY Ticker Symbol: ZONS

Mention this source code when you order and save!

Source Code  
**MA073**

# www.maczone.com



# FEEL the MUSIC!

## Get State-of-the-Art Sound for your Mac!

Dr. Bott carries the latest in cool, Mac-Friendly audio stuff designed to get the most out of iTunes!



### PowerWave USB Audio Interface & Amplifier

- Record your LP's to CD or MP3.
- Record Instruments or voice.
- Connect and power Home Speakers
- and much more!



**GRIFFIN**  
TECHNOLOGY



### Multimedia Speakers

Heart-stopping performance and more critical acclaim than any other multimedia speaker system. Surprising clarity and powerful, three-dimensional sound effects.

**MONSIEUR**

### Digital Media Remote

A powerful infrared remote that allows you to control multimedia applications the same convenient way that you now control your home TV!

**KEYSPAN**



### SportaPro StereoPhone

Collapsible StereoPhones with precise, powerful sound. These headphones are fully adjustable and can be worn behind or over the head.

**KOSS**

Contact your local **RESELLER** to purchase Dr. Bott products. [www.drbot.com](http://www.drbot.com) Toll Free: 800.541.1230 503.582.9944



**Dr. Bott**



# Broadway Photo

2922 Ave. L, Brooklyn, NY 11210

# 1-800-951-9632

Store Hours: Mon-Thurs: 9am-10pm • Friday: 9am-4pm • Sunday: 10am-7pm

Visit our website at: [www.bwayphoto.com](http://www.bwayphoto.com)

Customer Service: 718-338-3028  
Local & International: 718-338-1800  
24 Hour Fax Hotline: 718-338-3029  
Email: [info@bwayphoto.com](mailto:info@bwayphoto.com)

We specialize  
in Overnight Delivery.  
Place Your Order by 7:00 PM EST  
and Receive Your Order by  
the Next Business Day!  
For an Additional  
**\$29.95**



- 21 Day Satisfaction
- Next Day Air Available
- Worldwide Shipping
- No Surcharge on Credit Cards
- Government & School PO's Accepted

## DIGITAL CAMERAS

### NIKON Coolpix 4300

- 4.0 MegaPixels
- 3x Opt. Zoom/Digital Zoom
- USB

**\$324<sup>99</sup>**  
NEW! Coolpix 2100 .....\$189.99  
NEW! Coolpix 3100 .....\$269.99

### NIKON Coolpix 5700

- 5.24 MegaPixels CCD
- 4x Optical Zoom
- 2/3" CCD

**\$779<sup>99</sup>**

### OLYMPUS E-20

- 5.24 MegaPixels
- 2/3" CCD Screen
- USB

**\$499<sup>99</sup>**  
E-10 .....\$739.99

### OLYMPUS C-5050

- 3.34 Million Pixels
- 10x Digital Zoom
- 5x Optical Zoom

**\$529<sup>99</sup>**

### SONY DSC-F717

- 5.24 MegaPixels
- 2x Digital Zoom
- 5x Optical Zoom
- 2/3" CCD

**\$639<sup>99</sup>**  
NEW! DSC-F77 .....\$389.99

### CANON EOS 100

- 6.30 MegaPixel CCD
- 10x Optical Zoom
- CMOS Sensor

**\$1409<sup>99</sup>**

### CANON PowerShot G3

- 4.0 MegaPixels
- 4x Optical Zoom
- 1.8" LCD Screen

**\$509<sup>99</sup>**  
G2 .....\$449.99  
NEW! A60/A70 .....CALL

### FUJIFINEPIX S602

- 6.0 MegaPixels
- 6x Optical Zoom
- 1.8" LCD

**\$489<sup>99</sup>**  
NEW! F601 .....\$349.99  
Finepix 3500 .....\$289.99

### MINOLTA DiMAGE 7i

- 5.24 MegaPixels
- 7x Optical Zoom
- Direct Manual Focus

**\$689<sup>99</sup>**  
NEW! DiMAGE F300 .....\$404.99

### NIKON Coolpix 4500

- 4.0 MegaPixel CCD
- 4x Dig./4x Opt. Zoom
- 1.5" LCD

**\$449<sup>99</sup>**  
NEW! Coolpix SQ .....CALL

### NIKON D100

- 6.1 MegaPixels
- 1.8" LCD Screen
- USB

**\$1409<sup>99</sup>**

### OLYMPUS C-4000

- 4.1 MegaPixels CCD
- 3x Optical Zoom
- 3x Optical Zoom

**\$329<sup>99</sup>**  
NEW! Stylus 300 Digital .....\$289.99

### OLYMPUS C740

- 3.2 MegaPixels
- 10x Optical Zoom
- 3x Digital Zoom

**\$389<sup>99</sup>**  
NEW! C-750 .....CALL

### SONY DSC-P9

- 4.0 MegaPixels
- 3x Opt./2x Dig.
- 1.5" LCD

**\$409<sup>99</sup>**  
DSC-P7 .....\$319.99  
DSC-P71 .....\$289.99  
DSC-P8 .....\$339.99  
DSC-P10 .....CALL

### CANON EOS D60

- 6.52 MegaPixels
- 3072x2048 Resolution
- 1.8" LCD Screen

**\$1449<sup>99</sup>**

### CANON PowerShot S50

- 5.0 MegaPixels
- 3x Optical Zoom
- 4.1x Digital Zoom

**\$469<sup>99</sup>**  
S530 .....\$279.99  
NEW! A300 .....CALL

### FUJIFINEPIX S2

- 3024x2016 Resolution
- USB

**\$1599<sup>99</sup>**  
NEW! Finepix F700 .....CALL  
NEW! Finepix A303 .....\$235.99

### MINOLTA DiMAGE XI

- 3.2 MegaPixels
- 3x Optical Zoom
- 4x Digital Zoom

**\$319<sup>99</sup>**  
NEW! DiMAGE XT .....\$339.99

### NIKON Coolpix 5000

- 5.24 MegaPixels
- 2/3" CCD Screen
- USB

**\$539<sup>99</sup>**

### NIKON D1X

- 5.47 MegaPixels
- SLR Type Dig. Camera
- Uses Nikon AF-D/I /S Lenses

**\$2899<sup>99</sup>**

### OLYMPUS C-50

- 5.0 MegaPixels
- 3x Optical Zoom
- 4x Digital Zoom

**\$429<sup>99</sup>**  
NEW! Stylus 400 Digital .....CALL

### SONY Mavica CD-400

- 4.0 MegaPixels
- 2.5" LCD Screen
- 1/1.8" CCD

**\$509<sup>99</sup>**  
NEW! CD350 .....\$429.99  
NEW! CD500 .....CALL

### SONY DSC-P10

- 5.0 MegaPixels
- 3x optical Zoom

**\$479<sup>99</sup>**  
NEW! DSC-P32/52 .....CALL  
NEW! DSC-P72 .....CALL

### CANON EOS 1DS

- 11MegaPixels
- 2.0" LCD Screen
- IEEE 1394

**\$6499<sup>99</sup>**  
1D .....\$3009.99

### CANON PowerShot S45

- 4.1 MegaPixels
- 3x Optical Zoom
- 3.6x Digital Zoom

**\$404<sup>99</sup>**  
S30 .....\$329.99  
S230 .....\$329.99  
NEW! S400 .....\$419.99

### MINOLTA DiMAGE 7Hi

- 5.24 MegaPixels
- 7x Optical Zoom
- 1.8" LCD
- 2/3" CCD

**\$829<sup>99</sup>**  
NEW! DiMAGE S414 .....\$279.99

### SIGMA SD-9

- 1.8" LCD Screen
- IEEE 1394
- USB

**\$899<sup>99</sup>**

## DIGITAL VIDEO

### CANON GL-2

- IEEE 1394
- 20x Optical Zoom
- 100x Digital Zoom
- 2.5" LCD Screen

**\$1849<sup>99</sup>**

### JVC GY-DV300

- 14x Optical Zoom
- 1/3" CCD
- 440,000 MegaPixels

**\$2049<sup>99</sup>**

### GY-DV500

- 14x Optical Zoom
- 1/3" CCD
- 440,000 MegaPixels

**\$2999.99**  
NEW! GY-DV5000 .....\$3899.99  
GR-DVM96 .....\$629.99  
GR-DV7 .....\$689.99  
NEW! GR-DVP9 .....CALL  
NEW! SR-VS30 .....\$899.99  
NEW! HR-DVS3 .....\$709.99  
NEW! GR-DVLS20 .....\$589.99

### SONY DCR-VX2000

- 3-CCD Progressive Scan
- 12x Opt./48x Dig. Zoom
- 2.5" LCD Screen

**\$1899<sup>99</sup>**

### GVD1000

**\$349.99**  
GVD800 .....CALL

### SONY DCR-PC120BT

- Mini DV Format
- Smallest DV Camera
- 2.5" LCD Screen
- BLUETOOTH

**\$1049<sup>99</sup>**

### PANASONIC PV-DV953

- USB
- 3.5" LCD Screen
- 700x Digital Zoom
- 10x Optical Zoom

**\$529.99**  
NEW! PV-GS70S .....CALL  
NEW! PV-DV53 .....\$329.99  
NEW! PV-DV73 .....\$569.99  
NEW! PV-DV103 .....\$409.99  
NEW! PV-DV203 .....\$459.99  
PV-DV702 .....\$609.99  
PV-DV852 .....\$849.99

### PANASONIC AG-DVX100

- 3-CCD Imaging
- Super VHS
- 12x Optical Zoom
- IEEE-1394

**\$2649<sup>99</sup>**  
NEW! AG-DVC80 .....\$2429.99  
NEW! AG-DVC7 .....CALL  
AG-DV1000 .....\$829.99  
AG-DV2000 .....\$1779.99  
AG-DVC200 .....\$3499.99  
NEW! AG-EZ50 .....\$1049.99  
NEW! PV-VD8M30 .....CALL  
Special! PV-VM202 .....\$909.99

### EPSON Stylus 2200P

- USB/Serial Port
- PC or Mac
- 6 Color Small Archival Links

**\$609<sup>99</sup>**

### EPSON Stylus 1280

- Smudge Free Inks
- PC or Mac

**\$399<sup>99</sup>**  
Stylus 3000 .....\$1179.99

### OLYMPUS P400

- Dye-Sublimation
- 314 dpi Res.
- LCD Panel for Previewing

**\$419<sup>99</sup>**

## SCANNERS

### CANON FS4000

- 5888 x 4000 pixels
- 4000 DPI Optical Resolution
- USB

**\$619<sup>99</sup>**

### NIKON LS40

- 2870 Pixel Mono-chrome Linear CCD
- 2800 DPI Optical Resolution

**\$519<sup>99</sup>**

### NIKON Super Coolscan LS-4000

- 4,000 dpi Optical Res.
- Tri-linear CCD
- Multiple film format

**\$1029<sup>99</sup>**

## PRINTERS

Policy: Visa, MasterCard, Discover, American Express, Diners Club, Money Orders, Certified Check, (Personal Checks up to 14,000.00 with name and address imprinted on check), C.O.D. orders are also accepted. Orders by mail please print name address and phone number clearly. Shipping methods - in the Continental U.S.A. will be via FedEx, U.P.S. or Air Mail. Over size items via truck. Shipping and Handling are additional. 21 days for return or exchange (video & digital 7 days) with prior authorization only. (Call customer service for authorization number). Shipping and Handling are not refundable. All returns are subject to a minimum restocking fee of 5%. Prices may reflect mail-rebate. All returned merchandise must be in new condition and must include all packaging and printed material in original, unaltered condition. Broadway Photo is not responsible for typographical errors. All items are covered by USA, International or Broadway Photo and Video Warranty. All our merchandise is brand new and factory fresh. Quantities are limited. Thank you and enjoy your order.



# Insanely Great Deals on Memory, Macs, Drives & More!

## Lifetime Warranty RAM

**512mb  
ONLY  
\$59**

For the following CPU configurations:  
G4 Dual 1GHz/1.42GHz (DDR PC 2700)  
G4 iMac® (PC-133 168 pin CL3)  
G4 AGP 466-Dual 1GHz (PC-133 168 pin CL3)  
G3/G4/iMac® 350-600 (PC-133 168 pin CL3)

**1gb only \$114**

### PowerBook G4 RAM - SODIMMs

Model	RAM Type/Description	256mb	512mb	1gb Kit
PowerBook® G4 12"	DDR PC 2100 SODIMM	\$46	\$85	—
PowerBook® G4 17"	DDR PC 2700 SODIMM	\$49	\$89	\$169

## PowerMac® G4

**1gb Extra RAM  
+ Free Shipping**



**Faster, more expandable  
and more affordable than ever.**

**Dual 1.42 GHz 512mb/120gb**

**Dual 1.25 GHz 256mb/80gb**

**1 GHz 256mb/60gb**

\$39 RAM  
install fee applies

**Trade Up Your Old G4  
Call 1-800-80-WE-BUY for a quote!**

## Apple® Specials!

### 17" Powerbook® G4



1 GHz G4  
512mb/60gb  
SuperDrive  
**\$3294**

**New iPod  
In Stock!  
FREE Shipping**

**Final Cut Pro® 4.0 In Stock! \$994**

with **FREE** Contour ShuttlePro

**Final Cut Pro® 4.0 Upgrade \$394**

with **FREE** Griffin PowerMate

**Final Cut Express In Stock! \$294**

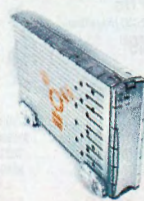
with **FREE** Griffin PowerMate

## Software & Specials!

AppleCare® for iBook®	\$192	AppleCare®
AppleCare® for Power Mac® + Display	192	
AppleCare® for PowerBook® + Display	262	
AppleCare® for iMac®/eMac®	132	
Mac® OS 8.6 w/Free 8.5 CD	79	
Contour ShuttlePro	87	
Contour Space ShuttlePro	39	
DVD-R 10-pak 4.7gb (single sided)	15	wow!!
Apple AC Adapter PowerBookG3/iBook	69	
Griffin PowerMate	38	
Griffin iMate USB/ADB Adapter	35	
Griffin iMic USB Audio Adapter	30	

Long  
term  
peace  
of  
mind.

## Have You Got The Drive to Succeed?



**External  
FireWire 800 Drives  
with Oxford 922 Chipset**

120gb	7200rpm	2mb Buffer	\$269
120gb	7200rpm	8mb Buffer	289
180gb	7200rpm	2mb Buffer	339
180gb	7200rpm	8mb Buffer	359
200gb	7200rpm	2mb Buffer	369
200gb	7200rpm	8mb Buffer	389

**Feel the Need for Speed? FireWire 800 delivers!**



**External FireWire 400 Drives  
with Oxford 911 Chipset**

120gb	7200rpm	2mb buffer	\$174
120gb	7200rpm	8mb buffer	197
180gb	7200rpm	2mb buffer	269
180gb	7200rpm	8mb Buffer	289
200gb	7200rpm	2mb buffer	308
200gb	7200rpm	8mb Buffer	319

### Internal ATA-100 Hard Drives

120gb	7200rpm	2mb buffer	\$132
120gb	7200rpm	8mb buffer	146
180gb	7200rpm	2mb buffer	219
180gb	7200rpm	8mb buffer	239
200gb	7200rpm	2mb buffer	245
200gb	7200rpm	8mb buffer	269

### External Drive Cases

3.5" FireWire 400 w/ Oxford 911	\$55
3.5" FireWire 800/USB2.0 w/ Oxford 922	179

### Pioneer DVD Writer

**DVR-A05 (4x Internal) \$269**



**Epson/ATI/Atto/Wacom/Aurora/NetGear/Sonnet/Dr. Bott/NEC/Kensington...**

Insanely Great since 1994



Authorized Reseller



Apple Specialist



Authorized Service Provider

Secure Online Ordering at **www.macsolutions.com**

**800-873-3726**

See us at  
Macworld NY  
CreativePro Conference  
Booth 665

**MacSolutions, Inc. 11933 Wilshire Boulevard, West Los Angeles, CA 90025 Fax: (310) 966-4433**

**University & School P.O.'s Welcome** Note: All prices are subject to change. Limited to stock on hand. \*408

\*Web prices listed. Call or check website for details on new computer purchases. Not responsible for typographic errors. Not valid in combination with any other offers or promotions.

All Apple products are only available for sale in-store or to previous MacSolutions customers due to our agreement with Apple Computer, Inc.



# Turn your Mac into a huge collection of guitar amps!



**Metal**



**Jazz**



**Country**



**Funky**

Play guitar anywhere, anytime, any style with your Mac

## AmpliTube *live*

- Award-winning sound acclaimed worldwide as the best tube amp-emulation ever made
- Combine a Clean, Crunch, Lead Amplifiers with 3 physically emulated cabinets
- Add Delay, Wah and Overdrive Stomps
- Play in perfect tune with the built-in chromatic tuner
- 128 presets, 64 users can be switched using MIDI foot control
- An unbelievable huge amp set, ready to play anytime
- Play along with your favorite tunes with iTunes



**AmpliTube Live \$129**

**www.amplitube.com**  
Call 772-466-9763, [ikmus@ikmultimedia.com](mailto:ikmus@ikmultimedia.com)



**IK MULTIMEDIA**

I D E A S   T U R N   M U S I C   O N



# everythingipod.com

VISIT US ONLINE TO SEE OUR NEW ACCESSORIES FOR THE NEW 10,15 & 30GB IPODS!!

## Action Jacket

Neoprene iPod Case with Armband & Swivel Belt Clip.

The Action Jacket features a seamless balance of function and style; providing the most protection and portability available for iPod.

Item #: w009-1212 ..... Your Price: \$29.99



## Jam Jacket

Best Available Scratch Protection for Your iPod!!

The Aqua Jam Jacket is made from an injected molded translucent rubber that fits your iPod like a glove. We would not have an iPod without this nifty protector!!

Item #: 009-4747 ..... Your Price: \$19.99



## PodFolio

Leather iPod Jacket

This handsome & professional iPod case is perfect for the fashion conscious iPod owner. Hand-sewn and made from beautifully crafted Italian leather, the Podfolio iPod Jacket also features a belt clip.

Item #: 009-9999 ..... Your Price: \$29.99



**\*\* CLEARANCE SALE \*\***  
On Select Original 5, 10 & 20GB iPod Accessories

## TransPod

All-In-One Car Solution for iPod.

Item #: w001-2002 ..... Reg. Price: \$99.95  
**SALE PRICE! \$79.99**



## Action Jacket

Neoprene iPod Case with Armband & Swivel Belt Clip.

Item #: 001-9898 ..... Reg. Price: \$29.99  
**SALE PRICE! \$19.99**



The Number One Source for iPod Accessories

1.866.800.IPOD  
DIGITAL LIFESTYLE OUTFITTERS

All New Web Site

www.poweron.com

## G3, G4, iMAC & eMAC DEALS

### iMac Deals

From \$299

G3 Beige 260mm	64/4GB/CD/ENET	\$299.99
G3 Beige 300mm	64/8GB/CD/ZIP	\$349.99
G3 350mm	128/4GB/CD/ENET/56K	\$399.99
iMac 233mm	32/4GB/24xCD/ENET/56K	\$299.99
iMac 333mm	64/6GB/CD/ENET/56K	\$399.99
iMac 400mm	64/10GB/CD/ENET/56K	\$499.99
eMac 700mm	128/40GB/CD/ENET	\$749.99
eMac 700mm	128/40GB/Combo/ENET	\$799.99

Add an Epson Stylus C42UX to any G3 or G4 computer for only ..... \$39.99

### PRE-G3 CLEARANCE

LG520 25mm	8/160 MB/CD	\$29.99
LG 575 33mm	8/160MB/CD	\$39.99
Perf 6360	24/2GB/CD	\$39.99
PPC 650D/250mm	32/4GB/CD/ENET	\$89.99
PPC 6115	32/350MB/CD	\$49.99
AI-In-One 5260	16/1GB/CD/14" Mtr	\$69.99
AI-In-One 5300	24/750MB/CD/14" Mtr	\$79.99
AI-In-One 5400	16/1.6GB/CD/ENET/15" Mtr	\$89.99
AI-In-One 5400	24/1.6GB/CD/14" Mtr	\$99.99
AI-In-One 5500	24/2GB/CD/15" Mtr	\$149.99

Add a Deskwriter 680c to any Pre-G3 computer for only ..... \$49.99

### eMac Deals

From \$749



### HARD DRIVE & CDROM CLEARANCE

40 MB Hard Drive 50 pin SCSI	\$9.99	Apple 12x CDROM IDE	\$49.99
1 GB Hard Drive 50 pin SCSI	\$19.99	Apple 12x CDROM SCSI	\$49.99
1 GB Hard Drive IDE	\$29.99	Apple 24x CDROM SCSI	\$69.99
2 GB Hard Drive 50 pin SCSI	\$39.99	Apple 48x CDROM IDE	\$99.99
2 GB Hard Drive IDE	\$49.99	Apple 2x DVD IDE	\$49.99
16 GB Hard Drive 68 pin SCSI	\$99.99	Apple 1x DVD-RAM IDE	\$79.99
82 GB Hard Drive IDE	\$109.99	Apple 5x DVD-ROM IDE	\$89.99

### OTHER DEALS

Backyard Baseball 2001	\$9.99
MacOS X	\$79.99
Adobe After Effects 5.0 MAC	\$269.99
Warcraft II Battle Chest	\$9.99
Corel KPT 6.0 Plug-Ins MAC	\$69.99
Who Wants to Be a Millionaire Sports	\$14.99
Deneba Canvas 7.0 Pro MAC	\$149.99
Learn to Speak Multiple Languages	\$19.99
3 Button USB Scroll Mouse	\$24.99
Apple ADB Mouse II	\$32.99
Apple ADB AppleDesign Keyboard	\$24.99
Philips Tivo HDR 112 14 hour	\$89.99
DVD Decoder Card S & W G3	\$69.99
UniBrain 3 port Firewire PCI	\$19.99
MacAlly USB/Firewire Combo PCI	\$65.99
19" Rack Enclosures	IN STOCK
Reconditioned PCs	IN STOCK

### Inkjets

From \$29



### DIGITAL DEALS

MacAlly 2 port USB PCI	\$34.99
MacAlly Floppy Drive USB	\$34.99
USB Hub 4 Port	\$65.99
Global Village 56K v.90 B&W Modem	\$29.99
HP Laserjet 4M	\$89.99
HP Photosmart 1215vm	\$129.99
HP Photosmart 100	\$129.99
HP Scanjet 6350cd	\$199.99
Epson Stylus C42UX Printer -New	\$49.00
IBM 15" VGA G54 Monitor	\$29.99
IBM 17" VGA Series E Monitor	\$79.99
Hansol 900P 19" MultiScan Monitor	\$99.99
NEC 22" FE 1250 MultiScan Monitor	\$299.99
Black 17" TFT FLATSCREEN Mtr	\$399.99
Mac Monitor to VGA Adapter	\$7.99
Reconditioned PC Laptops	IN STOCK

### Laserjets

From \$49



20% restocking fee on all Returned/Refused items.  
ALL PRODUCTS are USED and/or REFURBISHED unless otherwise noted.  
90 day PowerON warranty. All brands and product names are registered to their respective holders and are respectfully acknowledged.

1-800-673-6227

8801 Washington Blvd., STE. 101 - Roseville CA 95678

tel 916-677-6227 • 916-677-6228 fax







Ultra cool protection for your iPod.

**iSkin™ iPod Protector**

Available in 25 skin tones including:  
Frosted, Vibrant, Solids and Glow-in-the-dark.

**iSkin iBook / PowerBook G4 (15") Keyboard Protector.**



Molded to fit over each key

Removable and washable

Protects while you type

**NEW iSkin™ ProTouch**

Protects your Apple® Pro Keyboard  
against spills and dirt while you type!  
Ideal for the iMac®, eMac® and Power Macintosh® Pro Keyboards.  
(Available in translucent frosted skin tones.)

for product info and where to buy, visit us online.

**www.iSkinProtect.com**

Only  
**\$8<sup>25</sup>**  
per Month\*

Great Hosting.  
No Bull.

**FatCow**

### The Plan

- 100MB disk space
- 100 email accounts
- 5GB monthly trans.
- Shopping Cart
- CGI, PHP, MySQL

**\$99**  
a year

### Grow Your Own

- Start with our \$99.00 FatCow plan and
- Add all the disk space and bandwidth you need.

**!**

### Mini Moo

- Domain name parking
- 1 email account
- Coming soon page
- \$20 domain names

**\$5**  
a year

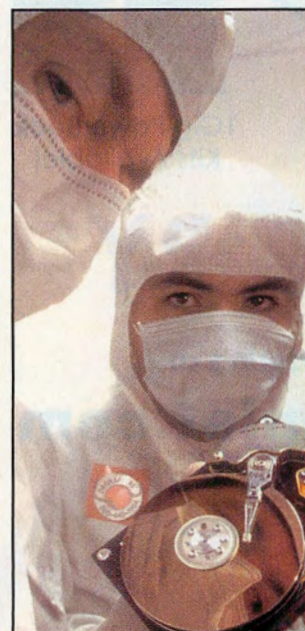
FatCow: The Smart Choice in Small Business Hosting.

**www.fatcow.com/addict**  
**Toll Free 1-800-925-2184**

Become a reseller  
call 1-866-544-9343 x 5008

**DATA RECOVERY: 800-440-1904**

**7 great reasons to choose DriveSavers:**



- Fast, advanced, proprietary techniques.
- Recommended and certified by all hard drive manufacturers.
- All operating systems; Mac, Windows, OS/2, Netware and UNIX.
- All storage devices including SAN, RAID and NAS systems.
- Instantly retrieve recovered data with DataExpress™.
- Government Contracts and High Security Service.
- Featured on MacAddict, MacWorld, CNN, BBC, and others.



**"We Can Save It!"**  
**www.drivesavers.com**

**Visit DriveSavers at MacWorld Expo New York**

©2003 DRIVESAVERS, INC. 400 BEL MARIN KEYS BLVD., NOVATO, CA 94949 INTL: 415-382-2000

**MEGA MACS.COM** 918-664-MACS  
fax 918-663-6340 (6227)

<p><b>Final Cut Pro 3™</b> \$799</p> <p><b>Macromedia Flash MX Bundle</b> only \$499</p> <p><b>Microsoft Office X</b> \$299</p> <p><b>Systemworks 2.0</b> \$99</p> <p><b>Camera Studio 2™</b> \$219</p> <p><b>Omni Page Pro X™</b> \$189</p>	<p><b>Mac OS X-1</b> \$39</p> <p><b>Mac OS X-2</b> \$119</p> <p><b>Mac OS X-3</b> \$84</p> <p><b>Mac OS X-4</b> \$64</p> <p><b>Mac OS X-5</b> \$64</p> <p><b>Mac OS X-6</b> \$64</p> <p><b>Mac OS X-7</b> \$64</p> <p><b>Mac OS X-8</b> \$64</p> <p><b>Mac OS X-9</b> \$64</p> <p><b>Mac OS X-10</b> \$64</p>	<p><b>Mac OS X-11</b> \$64</p> <p><b>Mac OS X-12</b> \$64</p> <p><b>Mac OS X-13</b> \$64</p> <p><b>Mac OS X-14</b> \$64</p> <p><b>Mac OS X-15</b> \$64</p> <p><b>Mac OS X-16</b> \$64</p> <p><b>Mac OS X-17</b> \$64</p> <p><b>Mac OS X-18</b> \$64</p> <p><b>Mac OS X-19</b> \$64</p> <p><b>Mac OS X-20</b> \$64</p>	<p><b>Mac OS X-21</b> \$64</p> <p><b>Mac OS X-22</b> \$64</p> <p><b>Mac OS X-23</b> \$64</p> <p><b>Mac OS X-24</b> \$64</p> <p><b>Mac OS X-25</b> \$64</p> <p><b>Mac OS X-26</b> \$64</p> <p><b>Mac OS X-27</b> \$64</p> <p><b>Mac OS X-28</b> \$64</p> <p><b>Mac OS X-29</b> \$64</p> <p><b>Mac OS X-30</b> \$64</p>	<p><b>Mac OS X-31</b> \$64</p> <p><b>Mac OS X-32</b> \$64</p> <p><b>Mac OS X-33</b> \$64</p> <p><b>Mac OS X-34</b> \$64</p> <p><b>Mac OS X-35</b> \$64</p> <p><b>Mac OS X-36</b> \$64</p> <p><b>Mac OS X-37</b> \$64</p> <p><b>Mac OS X-38</b> \$64</p> <p><b>Mac OS X-39</b> \$64</p> <p><b>Mac OS X-40</b> \$64</p>	<p><b>Mac OS X-41</b> \$64</p> <p><b>Mac OS X-42</b> \$64</p> <p><b>Mac OS X-43</b> \$64</p> <p><b>Mac OS X-44</b> \$64</p> <p><b>Mac OS X-45</b> \$64</p> <p><b>Mac OS X-46</b> \$64</p> <p><b>Mac OS X-47</b> \$64</p> <p><b>Mac OS X-48</b> \$64</p> <p><b>Mac OS X-49</b> \$64</p> <p><b>Mac OS X-50</b> \$64</p>
--	---	---	---	---	---

**CD-ROM Drives**

4x HP - Plexor	\$7
4x/24x Apple Int. IDE	\$9/89
32x Apple	\$19
24x Apple iMac DVD	\$37
Apple 24x10x40 CDRW	\$39
Apple 16x10x10x40 Combo	\$79
Apple SuperDrive DWR104	\$189

**DIGITAL CAMERAS**

USB Kensington	\$19
USB Logitech	\$24
FireWire Fire-i	\$99

**Jump Start Educational Software Packs**

30s each! choose from:	\$18
Preschool, Kindergarten, 1st or 2nd grade	
Norton/Symantec Bargains	
Utilities 4.0/6.0 Antivirus 6.0/7.0	\$714 \$914
Internet Security 1.0 or System Works 1.0	\$14

**MacroMedia**

Dreamweaver MX	\$279
Fireworks MX / Flash MX	\$239/249
Freehand 10 / Flash 4	\$149/59

**Other Software Bargains**

Timbuktu 2000 Set-	\$29
Business Plan Toolkit	\$39
Encyclopedia Britannica Roly Pol 2003	\$14
Web Savant	\$59
Office upgrades 98-2001X-	\$69/249/179

**PCI Cards**

USB 2port \$8	
FireWire Sport- \$17	
SMC 10/100 \$14	
Asante 10/100 \$11	

**Misc. Hardware**

USB floppy drive	\$37
Omega PCI SCSI Card	\$19
iFunPad/iFunStick	\$77
USB Lights	\$77

**BLOWOUT SEE WEBSITE**

**M-AUDIO® FREE SHIPPING**  
On all M-Audio products! \*\*

**Pro Speakers**

Optical 2 button USB \$14	
Mousepad \$5	
2 Pack \$10	

**Keyboards & Mice**

Kensington Orbit \$15	
Logitech Touch USB Keyboard \$19	

**Preowned System Specials**

Edge 07 G3/500/128MB/4GB/CD/DVD \$299	
Edge 07 G4/500/128MB/4GB/CD/DVD \$479	
Edge 07 G4/1GB/7200RPM/4GB/CD/DVD \$499	

**Mac OS**

7.6	\$48
8.1	\$30
8.5	\$30
9.0	\$30
X-1	\$39

**USB G3**

**WE BUY MACS!**  
We stock many parts!  
Check out our online clearance deals!

\* Refurbished, 1 Pro-owned - OEM, \*\* upgrade with previous version  
\*\*Free ground shipping only available for online orders  
prices subject to change - not responsible for errors



RAMJET

# MAC MEMORY

1Gig PowerBook  
Kits Available!

Secure Online Ordering at:

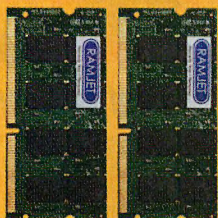
[www.ramjet.com](http://www.ramjet.com)

- Same Day Shipping
- Lifetime Warranty
- Educational PO's Accepted

or by calling:

**1-800-831-4569**

Save Money on Top Quality RAM



## FAMILY HISTORY - GENEALOGY

### REUNION<sup>®</sup> 8

Reunion 8 is the perfect tool to organize your family history. Plenty of room for names, dates, places, stories, notes, tidbits, and sources. Include all your favorite pictures, sounds, and home movies. Automatically build multimedia web pages to share your family history on the Internet! Print large, colorful tree charts, timeline charts, and fan charts for family reunions. Fun and educational for the whole family. Reunion 8 takes advantage of OS X and includes over 100 new features and enhancements!



**Leister Productions**  
web site/demo: [www.LeisterPro.com](http://www.LeisterPro.com)  
e-mail: [info@LeisterPro.com](mailto:info@LeisterPro.com)

To order, call...  
**MacConnection 800-800-2222**

Don't let him touch the computer!  
These pop up windows are driving me crazy!!!!  
I can't login to the web site!  
What was that password again?  
I can't find that file!  
**LIFE IS HARD**  
Why do these windows keep coming up?  
These pop up windows are driving me crazy!!!!  
I can't find that file!

## HELP IS HERE

AutoID Pop-Up Zapper BabySafe

**Batista.org**

ESellerate Orders Receive 10% Discount  
Use CouponID CPN996434158

## Macintosh Web Hosting & Co-Location



Special website  
hosting offers  
for MacAddict  
Readers!

**SATISFACTION  
GUARANTEED!**

[www.inno-tech.com/MacAddict](http://www.inno-tech.com/MacAddict)  
**877-858-7722**

**InnoTech**  
INTERNET PRESENCE SPECIALISTS

Exclusive hosting provider for **MacAddict**

## ink & toner

- **\$3.85 shipping!** • **\$2 off:** enter promo code "MA11"
- **All brands:** Alps, Lexmark, HP, GCC, Brother, more!

### Epson Paper

S041134	glossy, 20pk	6.46
S041124	glossy, 20pk	13.23
S041141	glossy, 20pk	9.08
S041156	glossy, 20pk	25.74
S041257	matte, 50pk	10.98
S041140	glossy, 20pk	9.08
S041286	8.5x11, 20pk	13.66
S041290	11x17, 20pk	39.67
S041341	8.5x11, matte	16.61
S041331	8.5x11, semi	13.66

Too much to list...call or visit site.

### HP Cartridges

51645A	new	25.61
	refilled	17.41
C6578A	new	52.91
	refilled	27.91

Too much to list...call or visit site.

### Canon Cartridges

SPECIAL: 4 Pack: 1x BCI-3C,		
1x BCI-3Y, 1x BCI-3M,		
1x BCI-3bk, orig Canon,		
See site for details		24.91

### Apple Cartridges

M8041G/C		22.76
A2M0077		4.79
M3330G/A		6.22
M3328G/A		44.56
M3240G/A		29.25

Too much to list...call or visit site.

### Epson Cartridges

T007201	Orig. Epson	20.95
	Inkfarm brand	16.75
T009201	Orig. Epson	26.36
	Inkfarm brand	16.99
T008201	Orig. Epson	17.51
	Inkfarm brand	13.99
T026201	Orig. Epson	25.95
	Inkfarm brand	16.88
T027201	Orig. Epson	21.51
	Inkfarm brand	16.88
T028201	Orig. Epson	27.52
	Inkfarm brand	19.75
T029201	Orig. Epson	27.02
	Inkfarm brand	19.75
T017201	Orig. Epson	23.99
	Inkfarm brand	14.95

Continued...

### more Epson...

T018201	Orig. Epson	19.95
	Inkfarm brand	16.05
T019201	Orig. Epson	26.36
	Inkfarm brand	14.75
T020201	Orig. Epson	22.27
	Inkfarm brand	13.65
T003011	Orig. Epson	28.35
	Inkfarm brand	15.74
T005011	Orig. Epson	34.29
	Inkfarm brand	18.74
C80 black	Orig. Epson	29.83
	Inkfarm brand	18.75
C80 c/y/m	Orig. Epson	11.02
	Inkfarm brand	7.88
S020187	Orig. Epson	21.55
	Inkfarm brand	10.75
S020193	Orig. Epson	17.70
	Inkfarm brand	11.75
S020189	Orig. Epson	23.99
	Inkfarm brand	9.99
S020093	Orig. Epson	18.95
	Inkfarm brand	8.99
S020191	Orig. Epson	21.95
	Inkfarm brand	16.25
S020108	Orig. Epson	24.64
	Inkfarm brand	10.45
S020089	Orig. Epson	21.95
	Inkfarm brand	14.11

Too much to list...call visit site.



1-800-INKFARM  
**inkfarm.com**  
the ink & toner supersite.™

**We Can Beat  
All Prices  
on  
Memory  
then  
CALL US!!**

**SEE OUR NEW  
HYPER SPEED  
MEMORY  
BY  
1-800-4-MEMORY**

**FREE  
T-Shirt  
with \$100  
HyperSpeed  
Memory  
purchase**

[www.18004MEMORY.COM](http://www.18004MEMORY.COM)  
**1-800-4-MEMORY**  
**1-800-463-6679**



# The Missing Sync™

## Mac OS Support

for  
Sony CLIE

### HotSync®

HotSync to Mac OS X/9

### Memory Stick™

Desktop Mounting on Mac OS X/9

### iTunes™

Use Your CLIE as an iTunes source

### iPhoto™

Import / Export Images to your CLIE

### Now Shipping!

- Missing Sync for Palm OS!
- Missing Sync for Samsung i330!

### Coming Soon!

- Missing Sync for Pocket PC!

mark/space

www.markspace.com



MarkSpace and Missing Sync are trademarks of MarkSpace, Inc. All other product names are trademarks or registered trademarks of their respective holders. Copyright © 2001. All Rights Reserved. MarkSpace.

# ACADEMIC DISCOUNTS

**Save Up To 80%**  
On Name Brand Software



### FULL-VERSION ACADEMIC PRICES:

Adobe®

Acrobat 6 Professional.....**Save 78%**

Design Collection.....**Save 60%**

Illustrator 10.....**Save 77%**

Web Collection.....**Save 66%**

Macromedia®

Contribute.....\$74

Dreamweaver MX.....\$94

Flash MX.....\$94

Studio MX.....\$189

Microsoft®

Office X.....**Save 60%**

Corel®/Procreate®

Bryce 5.....\$49

DRAW Graphics Suite 11.....\$139

Painter 8.....\$95

KnockOut 2.....\$144

ALL MAJOR MANUFACTURERS... ALL AT  
HUGE DISCOUNTS!

Adobe®  
PHOTOSHOP 7

**Call!**

**You Save! 52%**

Macromedia®  
STUDIO MX

**\$189**

**You Save! 85%**

NewTek®

LightWave 3D 7.5

**\$395**

**You Save! 75%**

Order Online and Receive a  
Discount on Shipping!

MA.AcademicSuperstore.com

**CALL US TODAY!**

**1-800-294-4035**



**ACADEMIC  
SUPERSTORE**

# HANG TOUGH



**SPORTFOLIO™**

Laptop cases for 17 Powerbook G4 and all other Apple™ products

# MARWARE

www.marware.com

954-927-6031



A Work  
of Art  
Is Not  
Complete  
Without  
a Frame

Come see our wide  
selection of stunning,  
custom-made, 15" & 17"  
monitor frames made to  
enhance any decor.  
From fine, hand-rubbed  
woods to elegant, old  
world designs, we have  
the right frame for your  
high-tech work of art.

**MonitorFrame**  
for iMac®

monitorframe.com • 800-386-3004

iMac is a registered trademark of Apple Computer, Inc.



# iMAC 333Mhz

160MB RAM/4 GB HD/24X CD-ROM/E-NET/56K MODEM



**\$429<sup>99</sup>**

**1-800-673-6227**

## GET ORGANIZED!

The most popular digital asset management tool for creative professionals. Manage & publish your text images, presentations, videos, MP3s, layouts and more with Canto Cumulus 5.5.



[www.canto.com](http://www.canto.com)

Cumulus

Best Prices On

# Memory

for all Apple CPUs

## Lifetime Warranty RAM

**512mb ONLY \$59**

For the following CPU configurations:

G4 Dual 1GHz/1.42GHz (DDR PC 2700)  
G4 iMac® (PC-133 168 pin CL3)  
G4 AGP 466-Dual 1GHz (PC-133 168 pin CL3)  
G3/G4/iMac® 350-600 (PC-133 168 pin CL3)

**1gb only \$114**



## PowerBook G4 RAM - SODIMMs

Model	RAM Type/Description	256mb	512mb	1gb Kit
PowerBook® G4 12"	DDR PC 2100 SODIMM	\$46	\$85	-
PowerBook® G4 17"	DDR PC 2700 SODIMM	\$49	\$89	\$169



## Hard Drive Fire Sale!



External  
FireWire 400  
w/ Oxford 911



120gb	7200rpm	2mb buffer	\$ 174
120gb	7200rpm	8mb buffer	197
180gb	7200rpm	2mb buffer	269
180gb	7200rpm	8mb Buffer	289
200gb	7200rpm	2mb buffer	308
200gb	7200rpm	8mb Buffer	319

[www.macsolutions.com](http://www.macsolutions.com)



**MacSolutions, Inc.**  
11933 Wilshire Boulevard  
West Los Angeles, CA 90025  
Phone: (310) 914-3200  
Fax: (310) 966-4433  
University & School P.O.'s Welcome  
Note: Prices subject to change without notice. Ad code 508

**FireWire® 800  
Hard Drives  
In Stock!**

Authorized Reseller Apple Specialist

**800-873-3726**

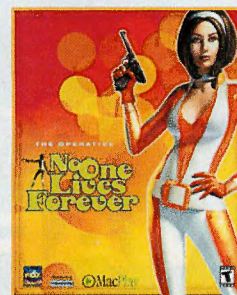
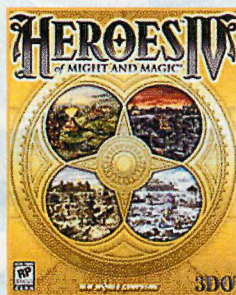
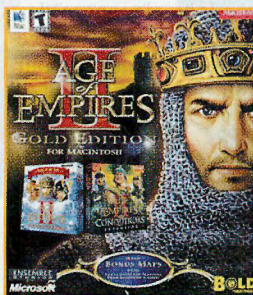
[www.macsolutions.com](http://www.macsolutions.com)

# GOT MAC GAMES?

Serious savings for serious gamers.

# gogamer.com

got lots of them and many more...





**LIND**

"Your Essential Source"

Power Accessories *for*  
Mobile ComputingAuto/Air Power Adapters  
for all  
Titanium G4s & iBook modelsReplacement Mini  
AC Adapters  
for all  
Titanium G4s & iBook models  
(65 Watts max.)Mini AC adapters feature:  
• 100 - 240 auto switching input  
• Fold away outlet prongs  
• Convenient cable wrap  
with Velcro™ Strap  
• 4.1 x 1.6 x 1.1"Lind adapters feature:  
• Fault protection circuitry  
with Automatic reset  
• Durable ABS housing  
• Nylon carrying caseLilon Auxiliary Power Packs  
For all Ti G4s & iBooksExtend your laptop runtime  
3 to 4 times longer  
Lightweight  
2.4(MP60)lbs - 3.4(MP90)lbs  
Size - 11.25 x 8.5 x .5"MaxPower 60(95WH)  
& MaxPower 90(140WH)Order online at:  
[www.lindelectronics.com](http://www.lindelectronics.com)  
or call #800-897-8994 to order

Lind Electronics, Inc. 6414 Cambridge Street, Minneapolis, MN 55426 #952-927-6303

The **ThinkDifferent** Store  
For all your iPod and iBook gear.iSee  
\$28.95iShare Earbud Splitter  
\$9.95iTrip  
\$34.95[www.iSkinStore.com](http://www.iSkinStore.com)

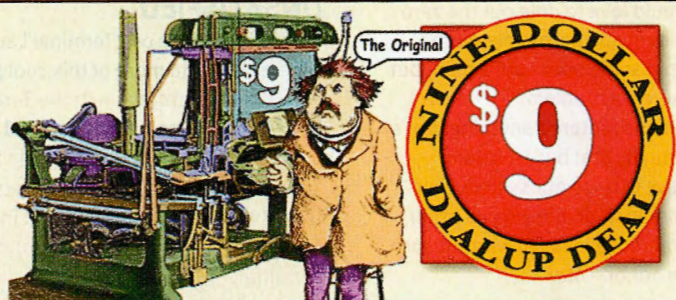
Designed Protection. Acme Made.

[www.acmemade.com](http://www.acmemade.com)**Free Your Desk****DeskMount****MARATHON**  
COMPUTER800-832-6326 [www.marathoncomputer.com](http://www.marathoncomputer.com) [info@marathoncomputer.com](mailto:info@marathoncomputer.com)**MAC-PRO**  
SYSTEMS & SOFTWARE  
[www.mac-pro.com](http://www.mac-pro.com)Visit our Web Site or Call for a  
Great Selection of iBooks, TiBooks,  
Towers, G3 & G4 iMacs & Many  
Hard to Find Older Mac Models!**\$1949** G4 Titanium 867  
867MHz, 256mb RAM  
40gb Hard Drive  
CDRW/DVD Combo  
Apple Refurb/1 Yr. War.

Sign up for Our Mailing List!

Any Ad is a Mac-Pro Ad!  
**800-525-3888**[sales@macofalltrades.com](mailto:sales@macofalltrades.com)**ONLINE**  
BUY or SELL**MAC**  
OF ALL  
TRADES  
COM  
800.304.4639**USED MACS****TheMACisp**

Formerly Appleisp

Apple - Macintosh  
is our SpecialtyVisit: [themacisp.net/ma](http://themacisp.net/ma) or call Toll Free: 1.800.307.0663



## LETTERS

## SPIDEY'S PAPER BAG

In your article "The Next Level" (May/03, p34), you show a picture of Spider-Man in a blue

getup with a bag over his head.

Here's why he's wearing it:

Spidey got a hold of an alien costume, which started acting strangely. He went over to the Fantastic Four to get some tests run on it and found that the costume was in reality a living creature, a symbiote.

The Fantastic

Four managed to remove his alien costume and contain the creature. For the trip back, they loaned Spidey an old blue FF suit and a paper bag for his head so he wouldn't have to swing home naked and reveal his secret identity.—Mark

Good thing the Fantastic Four chooses paper over plastic at the supermarket.—Max

It would really suck to run into Mary Jane dressed like this.



## FUN WITH FINK

Thanks to your April 2003 Disc, I am now experimenting with Phil Lavigna's "Fun with Fink" tutorial to install Fink, the package manager for installing Unix apps in Mac OS X. I never would have attempted to do this, but these step-by-step instructions got me up and running.—Mark Marin  
Congratulations!—Max

## SUPERSWEAT

I sweat easily, so I was disappointed to discover that the sweat dripping from my forehead as I read your magazine makes the ink run right off the page. Would it be so much more expensive to use waterfast ink?—Alex Ford

Jeez, Alex, what are you secreting? We sent MacAddict editor Narasu Rebbapragada



Let's get physical, physical...

PHOTOGRAPH BY MARK MADEO

down to the gym for some sweat testing (see above), and our sportproof ink hung on.—Max

## SIMS GEEK PARTY

For the game The Sims: House Party, I created new character skins with USB and FireWire logos on their shirts. The skins are compressed into a StuffIt file on my iDisk public Web page ([www.homepage.mac.com/ibook238/FileSharing2](http://www.homepage.mac.com/ibook238/FileSharing2)

.html) if anyone wants them.—Steven Matarazzo

Aw, look at those two (see below). As my great-granny Maxine once said, there's a seat for every ass, and she wasn't referring to that animal magnetism in that sofa.—Max



Yeow, that's hot.

## LAUGHTER IS THE BEST MEDICINE

The "Terminal Laughter" section of our "Access Your Mac with the Terminal" how-to (Mar/03, p62) really got your attention.

## TERMINAL GAMER

I never knew text-only games were so exhilarating. I've really gotten into Dead End. My goal is to find some way to get past that ferocious bear that keeps eating me. Good thing it's only text.—Erica  
Yeah, text-based maulings are far less stressful than the GUI kind.—Max

## WHO DUNNET?

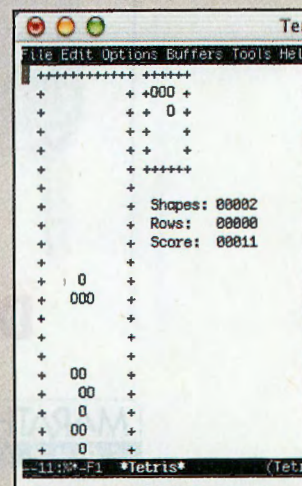
In your March 2003 issue, you refer to a command-line text-adventure game as Dead End. Just to let you know, the game is actually called Dunnet. I should know, I am the author.—Ron Schnell

Thanks for the correction. Any hints for that bear problem Erica (see above) is having?—Max

## UNSATISFIED

I loved the article on "Terminal Laughter." I want more! I want MORE!! Where I can find more of this cool geek stuff?—Felippe Mari

All right, all right. Launch the Terminal, and type the following: `ls /usr/share/emacs/21.1/lisp/play`. This will produce a list of text-based game scripts already installed on your Mac. Type `emacs` to launch the emacs text editor, then press Escape, then X to get to the menu bar. Finally, type in the name of the script (minus the .el or .elc extension). You're ready to play games in the Terminal.—Max



Play Tetris in the Terminal.

## ZERO TO HERO

I think your magazine is awesome, but whatever happened to that zero-widget rating you said you were going to use?—Danny Soto

The sadistic editors over here would love to dole out the zero widget and garner pleasure from some poor soul's pain, but there's a problem. We haven't yet encountered anything that's actually that bad. It would have to hose our system, self-combust, or make some other grandiose mess to warrant such an honor.—Max



## WRITE TO US!

MacAddict, 150 North Hill Dr.,  
Brisbane, CA 94005  
or letters@macaddict.com

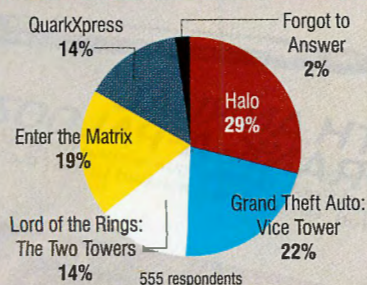
FOR CD PROBLEMS:  
go to [www.futurenetworkusa.com](http://www.futurenetworkusa.com)

FOR SUBSCRIPTION QUERIES:  
call (toll-free) 888-771-6222

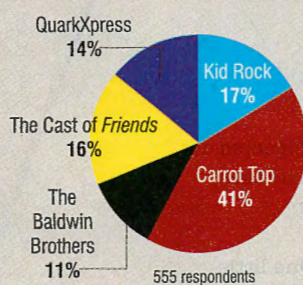
LOG OUT 95

## SURVEY SAYS

Which would you most like to see  
ported to the Mac?



Which would you most like to see  
deported?



## MacAddict READER POLL

**Q** What rumored Apple product has the best chance of becoming a real product?

- iPhone
- Power Mac G5
- Tablet Mac
- Apple PDA

**Q** What comic-book character (or duo) is most in need of his or her (or their) own major motion picture?

- Wonder Twins
- Wonder Woman
- Garfield
- Calvin and Hobbes

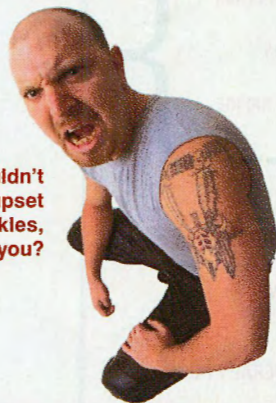
To answer, click Reader Poll at [www.macaddict.com](http://www.macaddict.com) before June 10, 2003. See the September 2003 issue for the results. Check [www.macaddict.com](http://www.macaddict.com) for a new poll each month.

## NO CONTEST

Why are your contests void in Arizona?  
—Nathan "Sinclair" Joslin

Our lawyer (let's call him Chuckles) tells us that certain states, like Arizona, have laws regarding games of skill that prevent us from running our contests without submitting complex documentation.—Max

You wouldn't want to upset Chuckles, would you?



## WINNER!

Burning Questions  
Contest Results

Thanks to **Alexander White** for submitting the best five things to do with the time saved from using a faster CD burner. He wins a LaCie d2 FireWire CD-RW (\$199, [www.lacie.com](http://www.lacie.com)). The overall five best answers (taken from a variety of entries) were:

1. Daisy-chain my cats together to form a Super Cat.
2. Make love to my wife.
3. Exfoliate, exfoliate, exfoliate.
4. Work out more to reshape my "computer butt."
5. Mix up supermarket jellybeans so people think they're getting cherry but they're really getting cinnamon.

## NEXT MONTH

➔ **50 BUGS SQUASHED**  
Don't miss our expert advice in our third-annual bug-destruction guide.  
➔ **INTERNET SERVICES COMPARED**  
Which to choose: .Mac, MSN, AOL, Earthlink, or Juno? We test and tell.  
➔ **BUILD YOUR OWN WEB SITE**  
You can do it the hard way. Or the easy way. We show you the right way.

## MacAddict CONTEST

## WIN A DIGI-CAM!

Win a 3.2-megapixel  
Olympus Stylus 300  
Digital camera (\$399,  
[www.olympus.com](http://www.olympus.com)).

All you have to do is  
write a witty caption for  
the picture shown below  
and email (or snail mail)  
it to us. Best caption wins.

Contest results will appear in  
our Nov/03 issue. One entry per contestant.



Smile! This  
Olympus digital  
camera soon  
may be yours.

## ENTRY FORM



Write a caption for the picture above.

### CONTESTANT INFORMATION

Full Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_  
State: \_\_\_\_\_  
Zip: \_\_\_\_\_  
Email or telephone: \_\_\_\_\_

Send email entries to: [contest@macaddict.com](mailto:contest@macaddict.com)  
Subject: Stylus 300 Digital Contest

Send snail-mail entries to:  
Stylus 300 Digital contest  
MacAddict magazine, 150 North Hill Dr.,  
Brisbane, CA 94005  
Deadline for entry: July 31, 2003

### Contest Rules

The judges will be MacAddict editors, and they will base their decision on 50 percent humor and 50 percent creativity. All entries must be received no later than July 31, 2003, with the winner announced around November 2003. By entering this contest, you agree that Future Network USA may use your name, likeness, and Web site for promotional purposes without further payment. All prizes will be awarded and no minimum number of entries is required. Prizes won by minors will be awarded to their parents or legal guardians. Future Network USA is not responsible for damages or expenses the winners might incur as a result of this contest or the receipt of a prize, and winners are responsible for income taxes based on the value of the prize received. A list of winners may also be obtained by sending a stamped, self-addressed envelope to Future Network USA c/o MacAddict contest, 150 North Hill Dr., Brisbane, CA 94005. This contest is limited to residents of the United States. No purchase necessary; void in Arizona, Maryland, Vermont, Puerto Rico, and where prohibited by law.


PHOTOGRAPH BY MARK MADEO



# THINGS FALL APART

*MacAddict* Structural Integrity  
Compromised in Health-Club Sauna

Whether readers inadvertently skipped reading or outright ignored our structural-durability warning label (see right) remains to be seen, but *MacAddict* recently received the following disturbing letter:

 I read your mag in the sauna at my health club. One little problem: At over 190 degrees Fahrenheit, *MacAddict* comes unglued, so I end up with a pile of single pages by the time I'm done being cooked.—Vic Larson

After reviewing the data behind our cautionary statement (see above), we thought it might be helpful to provide our readers with some guidelines for safe product use. Fundamental technological deficiencies in the stress capabilities of pulp-derived substances, such as paper, and chemically derived substances, such as glue, are implicit. After performing a complex variety of fatigue analyses, as well as thermal-nondestructive and bond-strength-integrity-of-adhesive-joint evaluations, we have determined that *MacAddict* is best read in cool, dry, unthreatening environments, such as your pantry. Excessive heat can bring your enjoyment of *MacAddict* to a potentially combustible end, and excessive humidity can at best make papier-mâché out of your magazine. Consult our structural integrity spectrum (see right) to determine the safety of your reading space.

## OTHER READING PLACES TO AVOID:

- Crazy Pete's "bunker" out in them there woods
- the Temple of Doom
- radioactive areas of the Nevada desert
- hyperbaric oxygen chambers when undergoing treatment for flesh-eating bacteria
- Pottery Barn

**Upgrades**  
Give your trusty old Mac new power for a lot less cash than you thought.

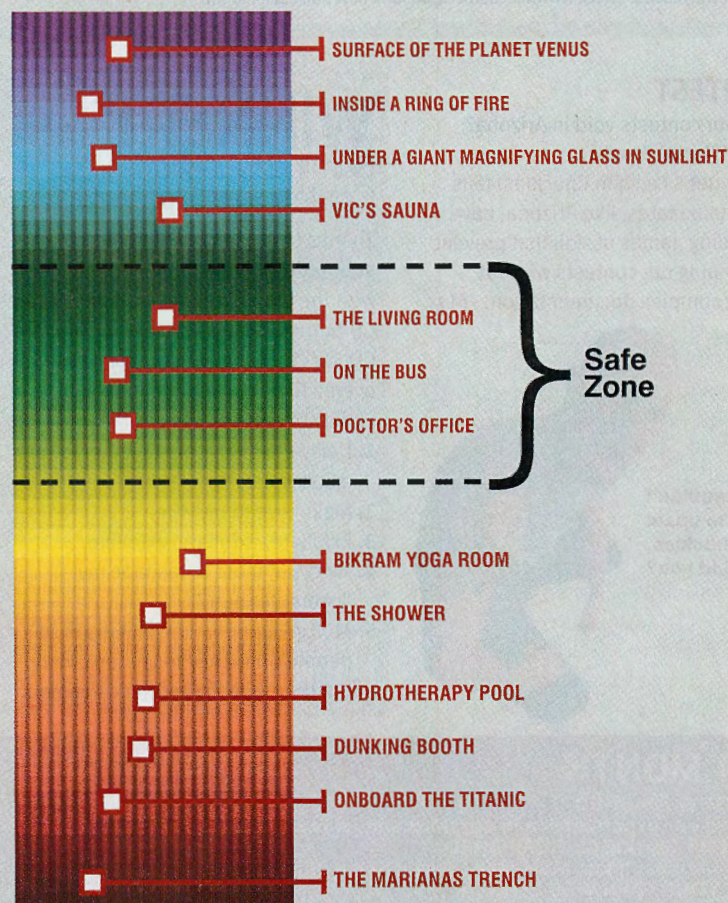
**Repairs**  
We show you what to do when disaster strikes your Mac.

**Storage**  
It's a whole new ball game, from FireWire 800 to internal RAIDe.

**5TH ANNUAL PRANK-A-PALOOZA**  
April Fool! 14 tricks guaranteed to get you fired, sluggish, or banished to the couch.

**WARNING: This product is composed of paper and glue.**

## MacAddict Structural Integrity Spectrum





# BUY 1, GET 4 FREE\*



\*Purchase one full copy of TechTool® Pro 3 or Drive 10™ and get a free upgrade to TechTool Pro 4 when it ships this spring! See details below.

## TTP: 4 TECHTOOL PRO 4



Offer expires July 31, 2003.  
Only available on specially marked packages.  
Promotional offers cannot be combined. Void where prohibited.



Micromat Inc. 800-829-6227 707-566-3831 info@micromat.com www.micromat.com

©2003 Micromat, Inc. All rights reserved. TechTool is a registered trademark of Micromat, Inc. Drive 10 is a trademark of Micromat, Inc.



Microsoft

# Smart, friendly, and oddly stylish. How very Mac.



**Introducing new MSN® for Mac OS X. Built to make the Internet work better than ever, and now built specifically for Mac.** With lots of smart features, like flexible Parental Controls you set to block specific Web sites or whole categories of sites. And tough Junk E-mail Protection you can customize in seconds to guard your inbox, your way. And it wouldn't be made specifically for Mac without dedicated Mac support 24 hours a day, 7 days a week from Mac experts. **It's better with the Butterfly.** for Mac OS X



**Call (866) 896-6768 or visit [join.msn.com/mac](http://join.msn.com/mac) today.**

© 2003 Microsoft Corporation. All rights reserved. Microsoft, MSN, and the MSN logo are either registered trademarks or trademarks of Microsoft Corporation in the U.S. and/or other countries. Apple, Mac, and Macintosh are registered trademarks of Apple Computer, Inc.